



L-07M/L-07C L-09M/L-07T

DIRECT DRIVE POWER AMPLIFIER SYSTEM
WITH FM TUNER

DC POWER AMPLIFIER
MODEL L-07M



KENWOOD



KENWOOD

POWER
ON



OFF

OUTPUT

ON/OFF

SUBSONIC
FILTER
18Hz 12dB/OCT

ON/OFF

GAIN ATT

LEFT - RIGHT



BASS

FLAT



KENWOOD DC POWER AMPLIFIER MODEL L-09M



KENWOOD FM STEREO TUNER MODEL L-07T



MPX



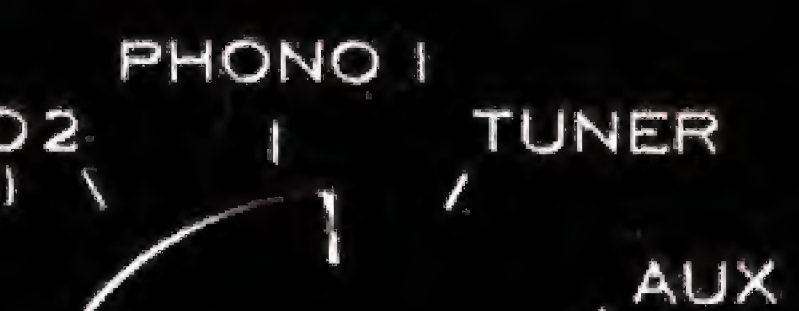
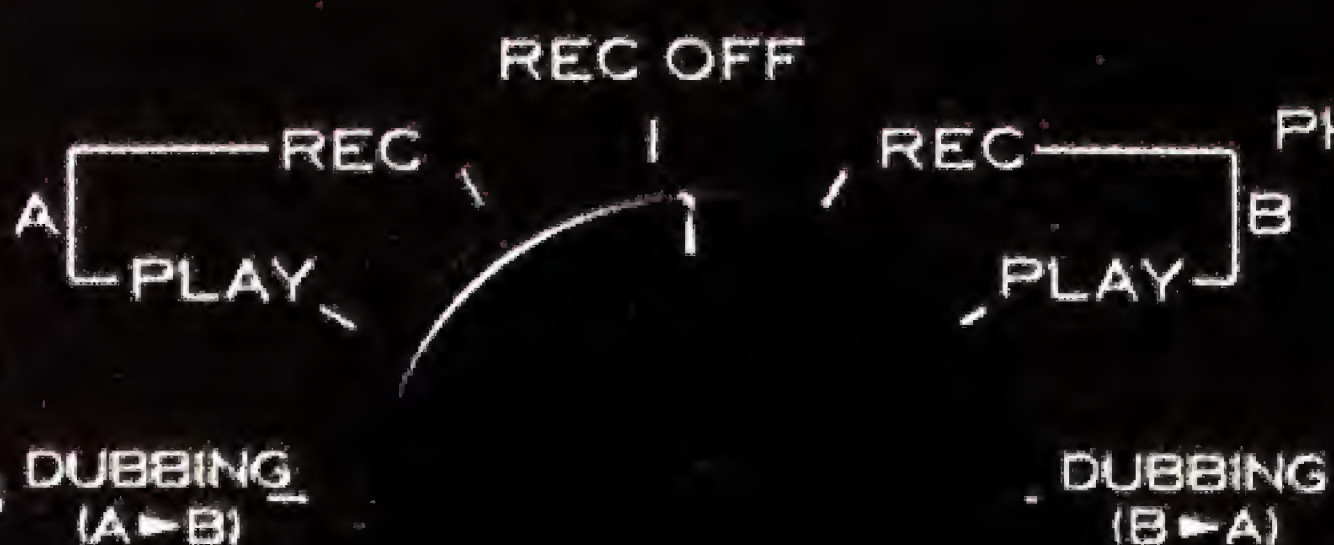
STEREO CONTROL AMPLIFIER MODEL L-07C

MASTER VOLUME

TAPE

INPUT SELECTOR

EBLE





**Now, for the first time, there is
an amplifier system that takes into
account signal performance from the input
terminal of the control amplifier right up
to the speaker terminals. From concept to
configuration, the ultimate criterion
is pure, natural tonal quality.
Kenwood's direct drive power amplifier
system will fire the imagination
of every audio purist.**

After a long, intensive study of the role of the amplifier, Kenwood's engineers reached one conclusion. Conventional control amplifiers and power amplifiers perform no better than good integrated amplifiers. Surprised? Think of it this way. Nearly all recent individual performance improvements in amplifier technology are concerned with static performance, not performance related to conditions of actual musical reproduction. Even our own discovery of Dynamic Crossover which led to the independent Dual Power Supply system, and our innovative development of the DC amplifier which brought a wide linear frequency response without phase distortion—both designed to enhance tonal quality—even

these were not enough for us to be able to guarantee critical performance of the total amplifier system. And when our engineers realized that even new 'super' speaker cables still cause severe waveform deformation, they knew it was time to get down to the basics. Their study encompassed the amplifier system as a whole, from the cartridge to the speaker. The results are embodied in the L-07 and L-09 direct drive power amplifier system. This consists of the L-07M single channel power amplifier, with power output rated at 150 watts RMS, and Total Harmonic Distortion an incredibly low 0.008% through the whole audio spectrum. The S/N ratio measures 120dB.



For the L-09M, there is 300 watts of continuous power with less than 0.02% THD. Then there's the L-07C control amplifier, with two independent FET phono equalizers, one of them a high gain ICL amplifier specifically for use with Moving Coil cartridges. 100dB of channel separation is maintained through the whole audio range. Moreover, Kenwood guarantees all specifications and performance up to the end of the respective connecting cables; for the L-07C, to the end of the audio cable connecting it with the power amplifier; for the L-07M, to the end of the speaker cable at the speaker terminals. You may be surprised that a power amplifier is located close to each speaker system. But we can

guarantee that the special one-meter long speaker cable has virtually no effect on tonal quality. Similarly, since the cable between control and power amplifiers transmits only the signal voltage and not the power, it can be long, with no effect on sound quality, provided the control amplifier is specially designed and has extremely low output impedance like the L-07C, rated at less than 10 ohms. The most noticeable thing you'll find about this amplifier system is that it is silent. If there is any imperfection in the sound quality, then it comes from outside the system. We say this is an amplifier system that every audio enthusiast owes it to himself to hear.



Tonal Quality And The Sense Of Hearing

In recent years, audio buffs have seen great improvements in amplifier technology. S/N ratios are high, and distortion levels have been reduced to levels hardly imagined only a few years ago — sometimes to the value of one or two full orders. Increased power ratings have been made with ever low distortion levels, and wider dynamic ranges. Nevertheless, it is only very recently that audio specialists, with Kenwood in the lead, have stressed the importance of *dynamic* characteristics. For the S/N ratio, harmonic distortion, channel separation, transient distortion and so on, are largely *static* measurements made in laboratory conditions. Yet the dynamic characteristics of an amplifier in actual musical reproduction have a profound effect on an individual's "sense of hearing". This is a field which has been successfully challenged by innovations like Kenwood's theory of Dynamic Crosstalk, which led to the independent Dual Power Supply system, and the DC power amplifier. This sense of hearing is our ultimate criterion in any decision to pursue and adopt new technology. We believe that the most demanding test that can be made of the sound quality of any audio equipment is provided by our sense of hearing.

The Neglected Cable

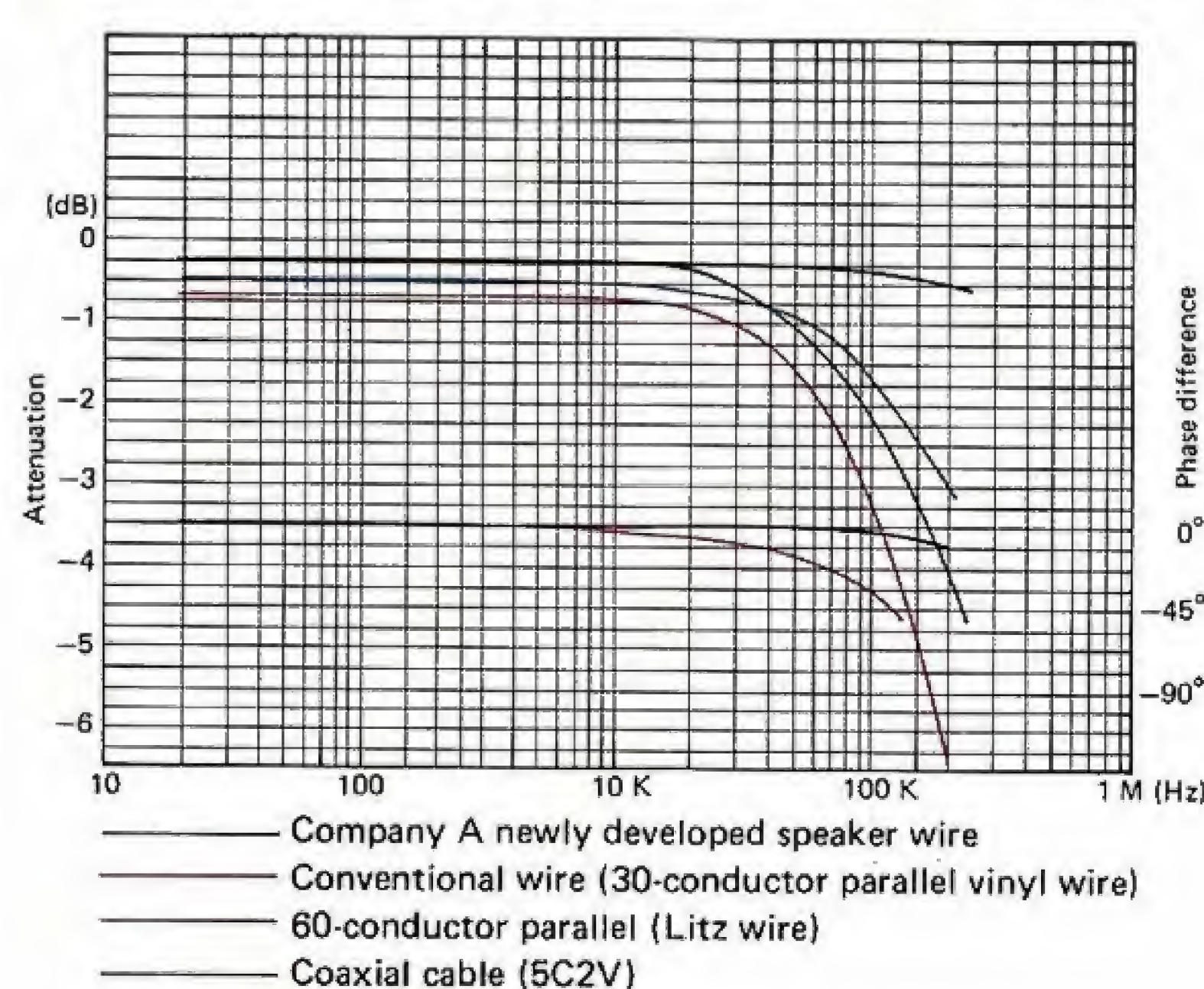
Recent so-called 'super' or 'stacked' cables have yielded improvements in sound quality on account of their superior transmission characteristics. But this is not enough, because the deficiencies of the cable when considered as an extension of the amplifier have been overlooked. Moreover, the longer a cable becomes, the greater its effect on sound quality. The reason? The speaker's paper cone diaphragm simply does not respond fast enough for the amplified signal. Also, when the signal is cut abruptly, the cone responds too slowly. Even a low amplifier damping factor has little effect on the combination of cable inductance, reactance and capacitance that causes this deterioration in sound quality. However, the emergence of the 'super' cable has at least extended the concept of the role of the amplifier to the speaker terminals.

Actually, This Was The Starting Point Of The Kenwood Direct Drive Amplifier System!

If you study the graph of our test of speaker cables, you'll see that there is a

large energy loss and phase rotation above 10 kHz. In the measurement, this loss is held satisfactorily to between 0.5 dB and 0.6 dB below 10 kHz. But when we made actual listening tests, we sensed there was still something missing. It was like a bucket with a hole near the top, and performance never went above the level of the hole. So our engineers devised a new test using a 30 Hz tone burst and measuring the difference between the cables at the speaker terminals. They found that although the pulse signal input was perfect, there was deformation of the waveform — the very lifeblood of sound. The difference in wave height and overshoot at the output is actually caused by the counter-electromotive force from the speaker, the result of greater resistance and weaker damping of the long cable. Fundamentally, even very low distortion which cannot be measured, can be detected by our sense of hearing.

Frequency response and phase characteristic of various speaker cables



The Speaker Cable Is Short And The Audio Cable Long

Actually, the best thing would be to do away with the speaker cable altogether, but this is obviously impractical. We found, however, that our specially developed speaker cable could be used up to one meter from the speaker system, with virtually no effect on tonal quality. On the other hand, the audio cable between power amplifier and control amplifier can be long. Since it is merely a signal voltage transmission line, there is no phase distortion or waveform deformation, so the whole power bandwidth is unaffected. Our conclusive test using a digital memory scope shows that in the final waveforms measured at the speaker terminals, the Kenwood amplifier system faithfully reproduced the input waveform. Thus, as a result of the extremely low impedance output of the L-07C combined with other circuitry improvements, the audio cable can be long without any waveform deforma-

tion, and we can guarantee performance to the end of this cable, at its connecting point with the L-07M.

Moreover, besides improving the L-07C's phono equalizer circuitry, we have included the effects of the cartridge and turntable in our design concept of the direct drive amplifier system. This, we think, superbly illustrates that Kenwood has attained what has always been just a gleam in the audiophile's eye: That the true audio system should provide the same sound quality from source to speaker.

The L-07M Single Channel Direct Drive Power Amplifier

0.008% THD Is Maintained From The Lowest Volume Level To Full Power

By eliminating phase distortion, especially in the low frequency range, the DC amplifier provides excellent transient response and wide linear frequency response to deliver clear sound images of high resolution throughout the dynamic range. The triple push-pull class AB full complementary symmetry circuitry employs uniform characteristic high linearity transistors. These have a high frequency cutoff characteristic that yields exceptional tonal clarity in the high frequency range. Using the linearity of these transistors, a remarkably low THD of 0.008% is obtained, a factor maintained from very low volume levels to full rated power output of 150 watts. In our concept, while the input signal is controlled by the control amplifier, the speaker's energy derives from the power supply of the power amplifier, which uses the nearest convenient AC power source, thus eliminating the long speaker cable. Because of the importance of the power supply circuitry, we developed a special, highly rigid power supply structure, with wiring minimized to allow a smoother signal flow.

Chimney Type Structural Heat Sinks Provide The Most Efficient Heat Dissipation Yet

The solid cast aluminum heat sinks used in the L-07M are specially designed. By the convection method, they channel the heat from transistors upwards, using all four sides of the funnels in the four blocks. By preventing temperature rises during operation, circuitry is stabilized for better performance. Moreover, these sinks are designed to be part of the chassis structure, providing extra rigidity.



① Improved audio cable

A special 12 m audio cable is supplied with the unit. To transmit positive and negative signals, it is not desirable to use an asymmetric cable like a shielded wire. Accordingly, a two-core cord of improved transmission characteristics is employed, successfully reducing the induction of noises from outside.

② Improved speaker cable

An improved speaker cord of 1 m length is supplied with the unit. For the core wire, seven flexible stranded wires of 0.23 mm diameter are used, each being covered with PVC to reduce capacitance. Two of this seven-wire core are paired to form the positive and negative lines, and are twisted to reduce, by a large margin, the inductance over a wide frequency range.

③ Remote control cable

④ Screw-lock type pin jack (patent pending)

Instead of the ordinary pin jack which easily comes loose, a screw-lock type pin jack is used at each end of the audio cable.

The connector is gold plated so as to reduce the contact resistance and improve the tone quality.



Residual Noise Less Than $35\mu\text{V}$;
S/N Ratio 120 dB

Residual noise cannot be reduced completely at low volume levels, so it is essential that it should be as low as possible. The residual noise level of the L-07M is actually less than $35\mu\text{V}$, which provides a noise-free sound quality both at the lowest volume level and at the highest volume level to the threshold of aural perception. Moreover, the 120 dB S/N ratio is excellent, and with the massive power capability, provides clean reproduced sound over a very wide dynamic range.

Remote Power Switch

The L-07M is equipped with a relay circuit activated by a remote power ON-OFF switch on the L-07C control amplifier. This allows the L-07M to be located close to the speaker system, and any nearby AC outlet can be used to drive the speakers. As discussed earlier, the power amplifier is linked to the control amplifier by a specially designed long audio cable used with the abnormally low output impedance of the L-07C.

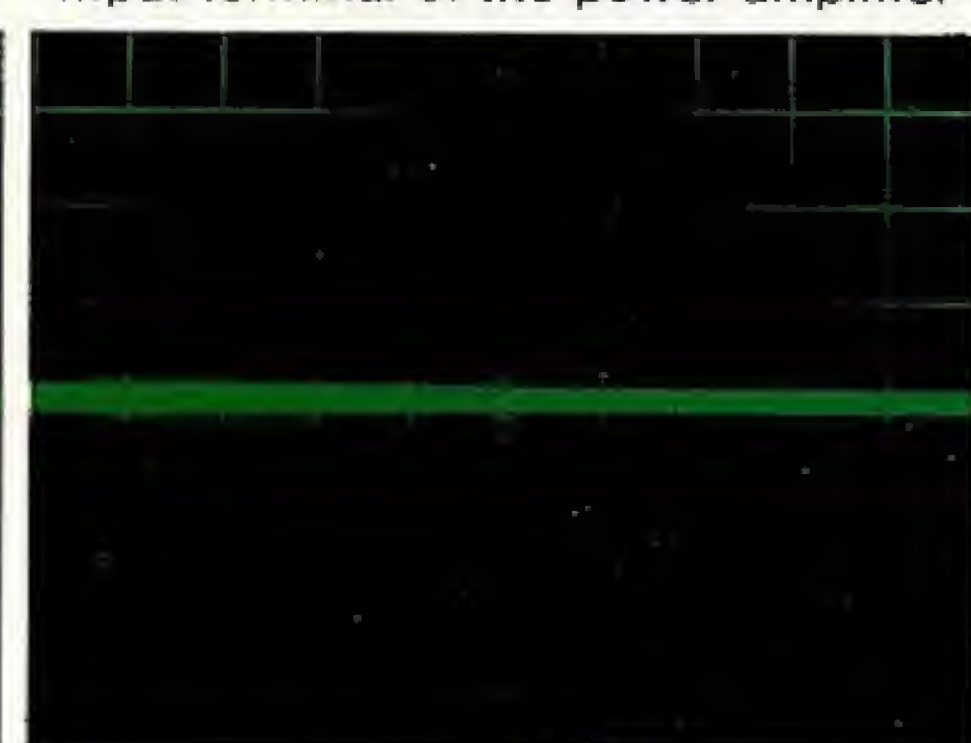
New Screw Type Locking Pin Plugs Are Gold Plated

If ordinary RCA type plugs are not pushed in correctly, or if they come loose during operation, the resulting hum driven at full power can literally destroy the speakers, as well as cause damage to the amplifier. To prevent any possibility of accident we have designed a special screw type pin plug that locks itself. Furthermore, the gold plated finish ensures minimum contact loss. These are provided at both ends of the special 12-meter audio cable to the control amplifier.

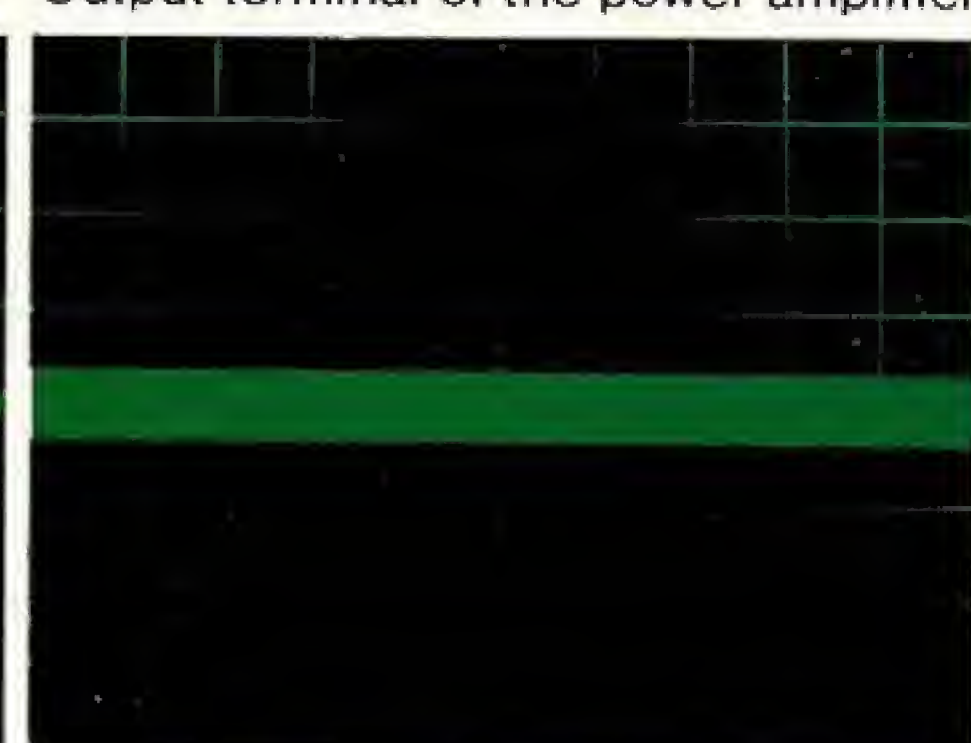




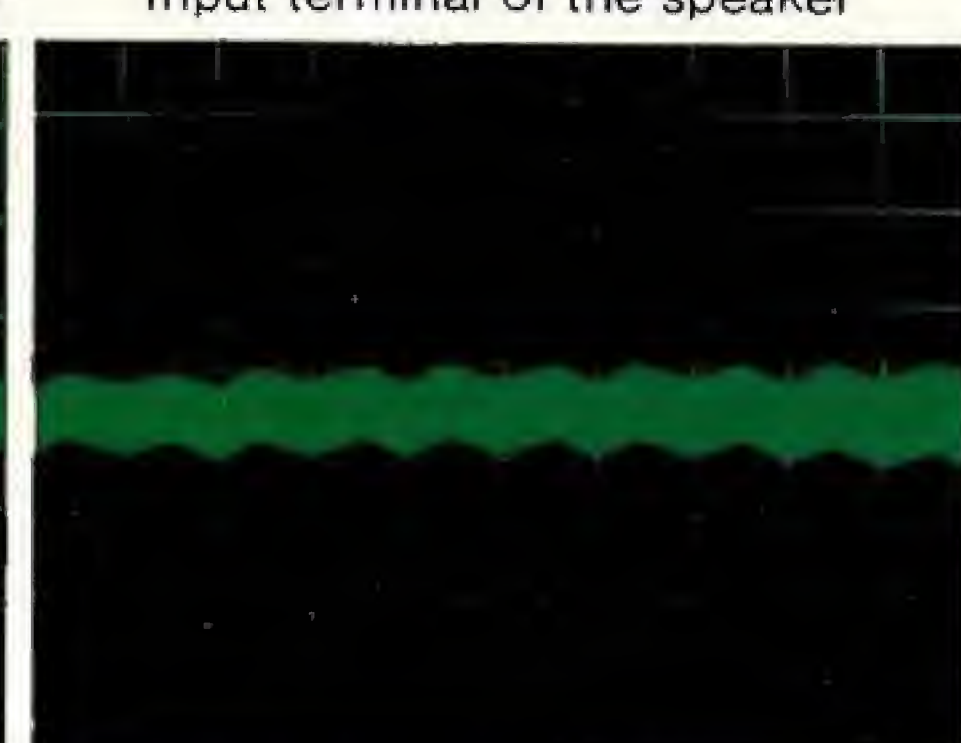
Distorted waveform at 1kHz, with distortion factor 0.0025% (limit of measurement)



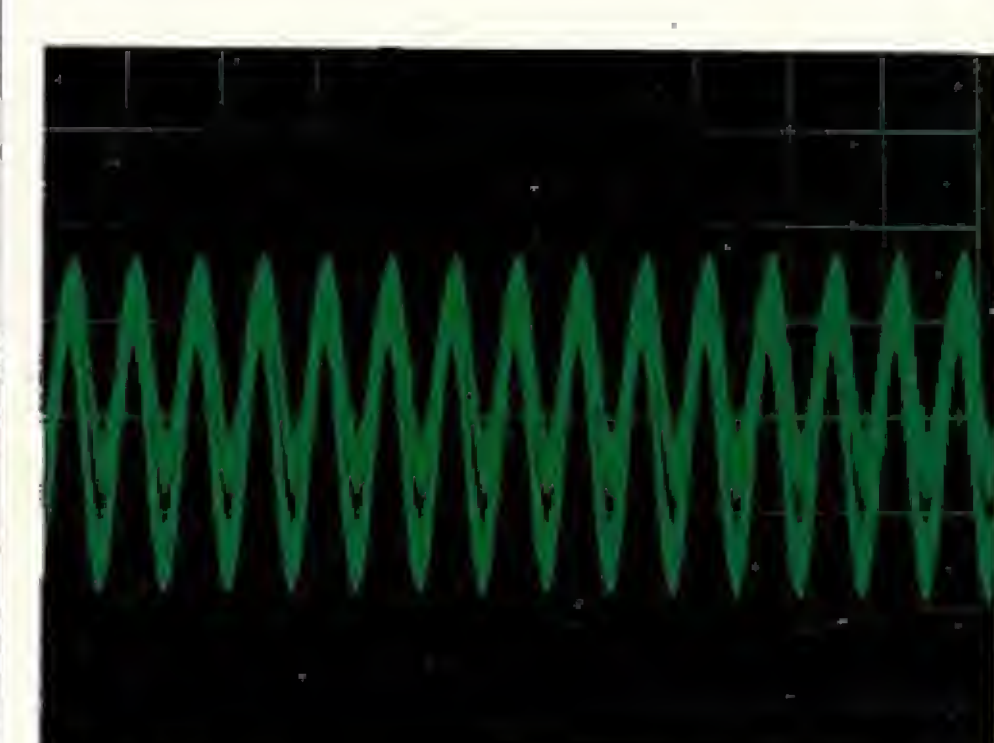
Distorted waveform at 1kHz, with distortion factor 0.0025% (limit of measurement)



Distorted waveform at 1kHz, with distortion factor 0.005%



Distorted waveform at 1kHz, with distortion factor 0.0052%



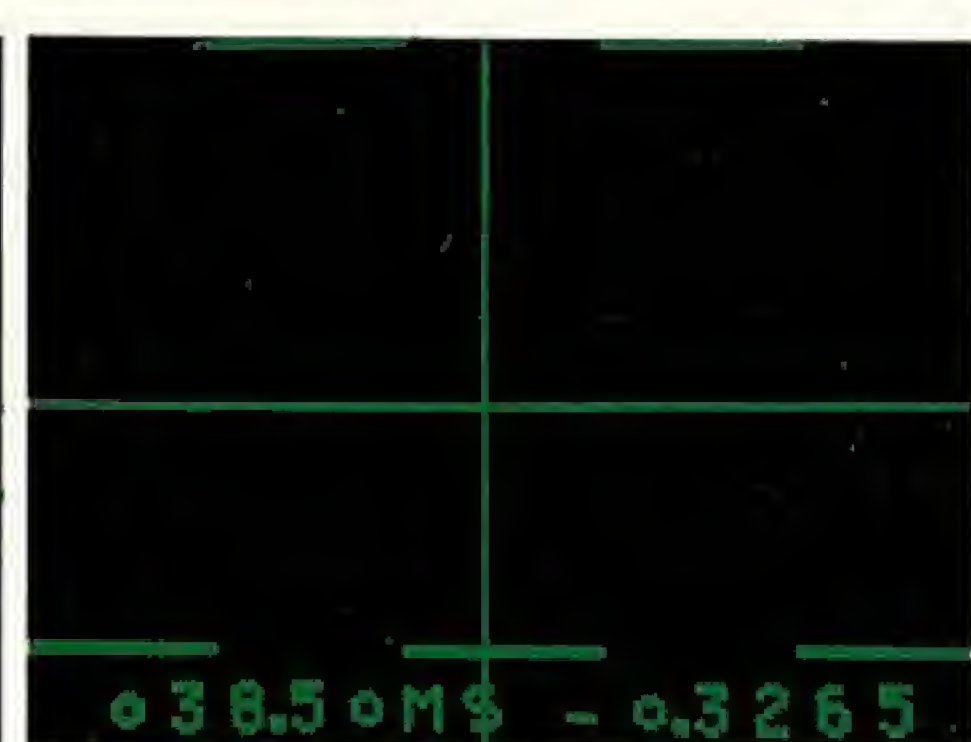
Distorted waveform at 1kHz using a 10m speaker cable; distortion factor 0.051%



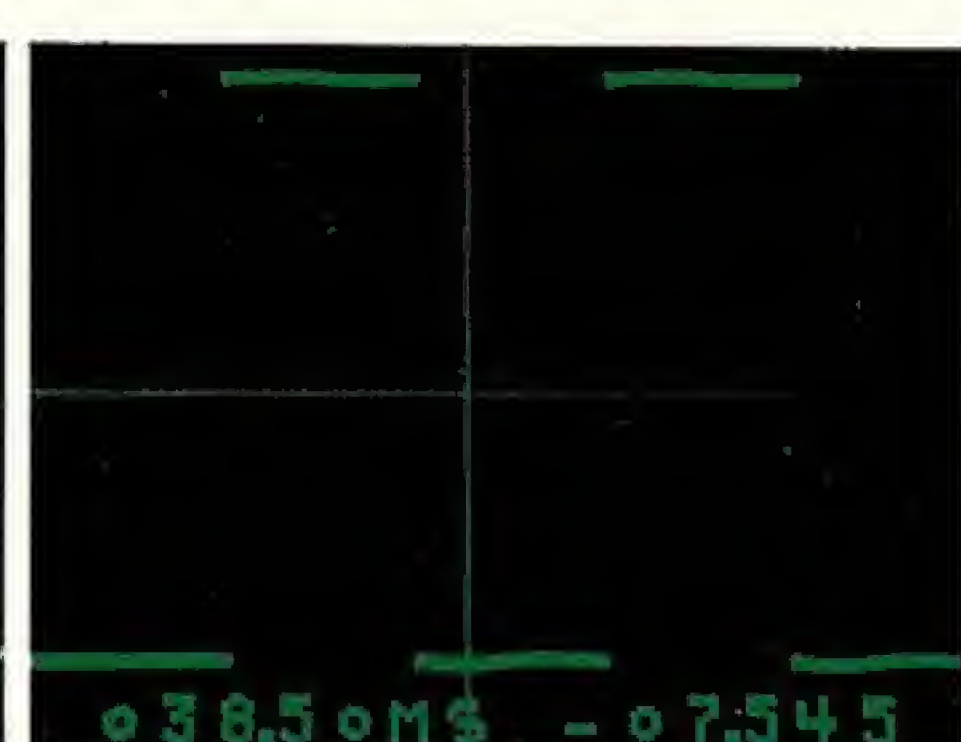
Pulse waveform at 20Hz



Pulse waveform at 20Hz



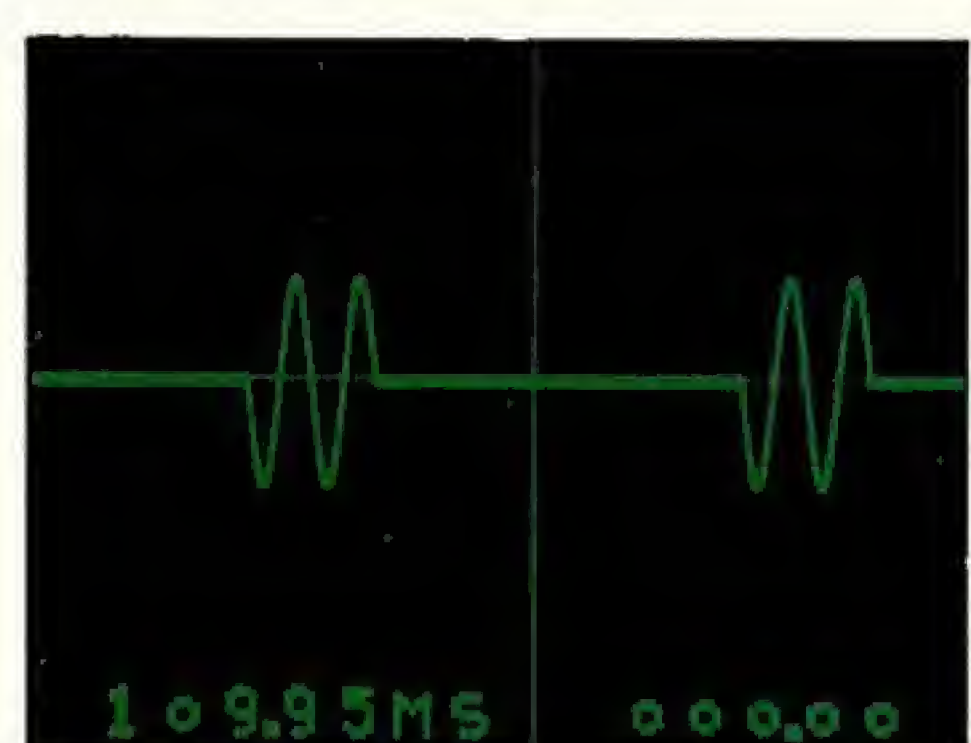
Pulse waveform at 20Hz



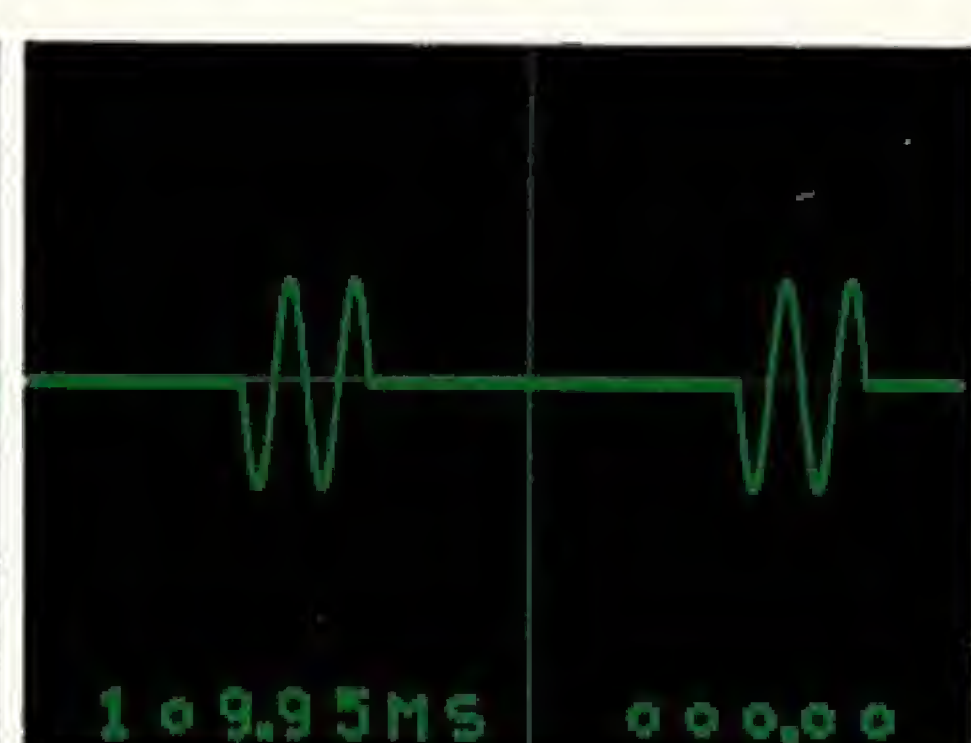
Pulse waveform at 20Hz



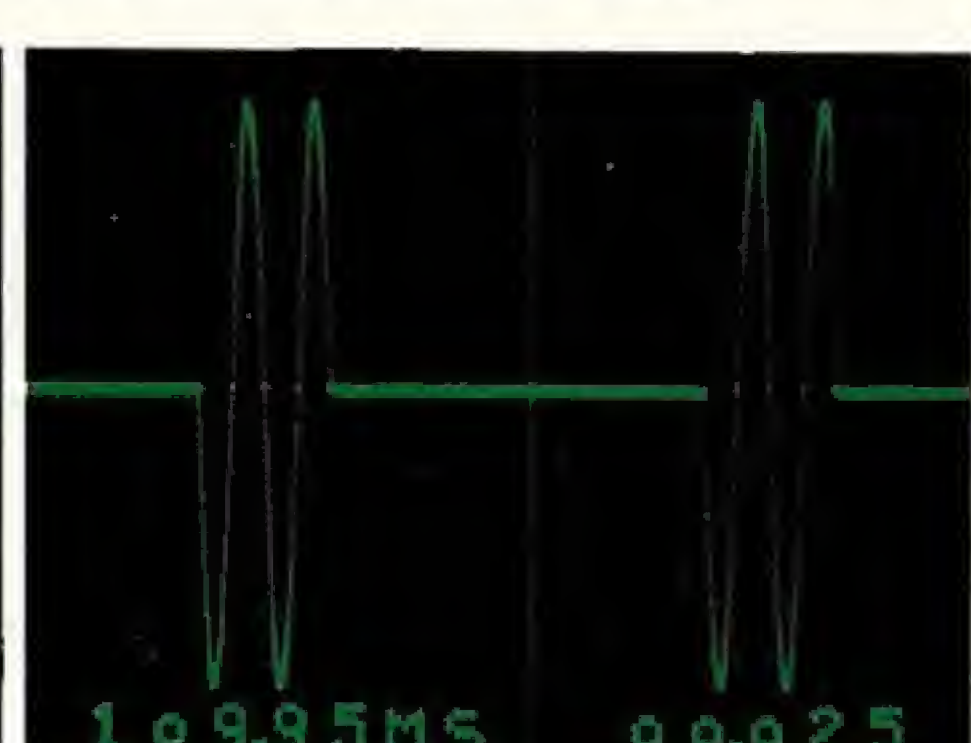
Pulse waveform at 20Hz using a 10m speaker cable



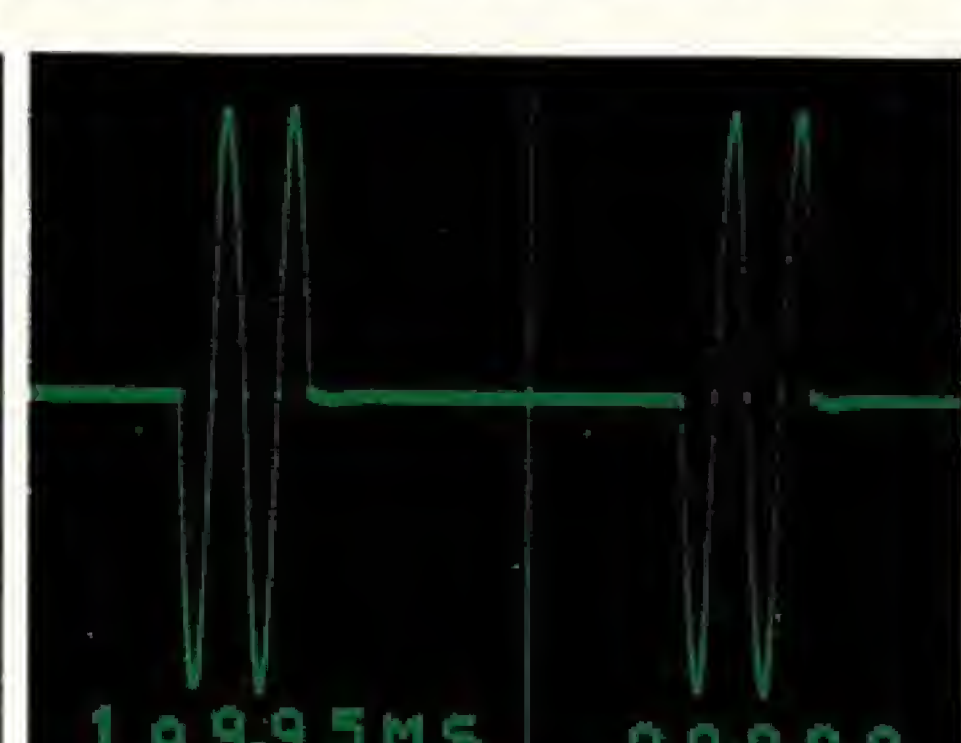
Tone burst waveform at 100Hz



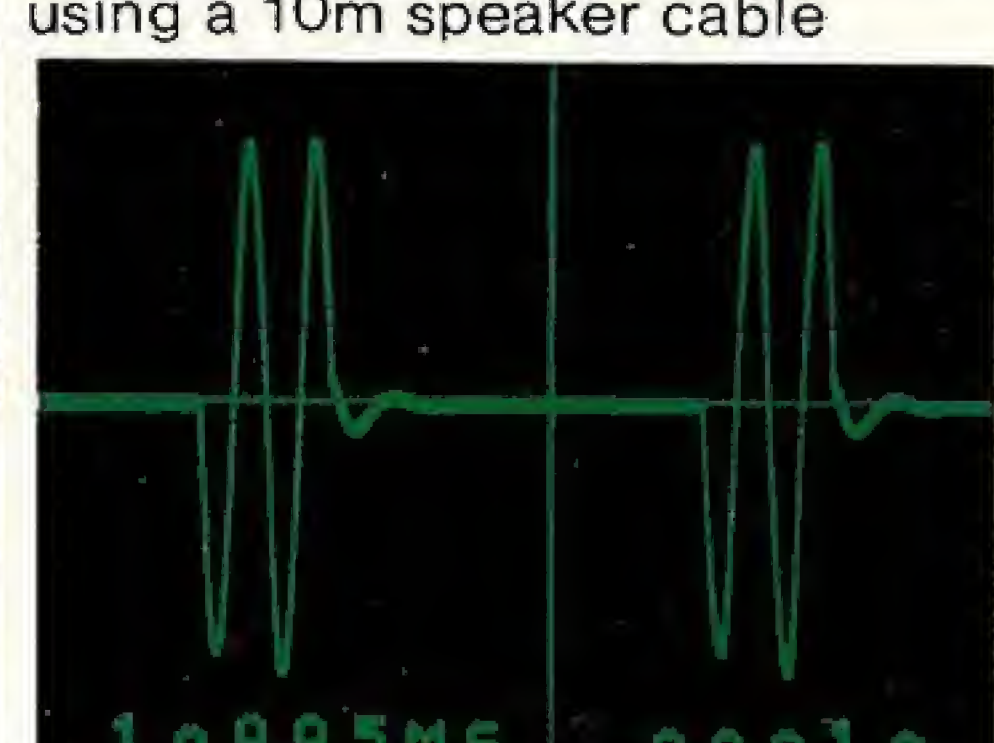
Tone burst waveform at 100Hz



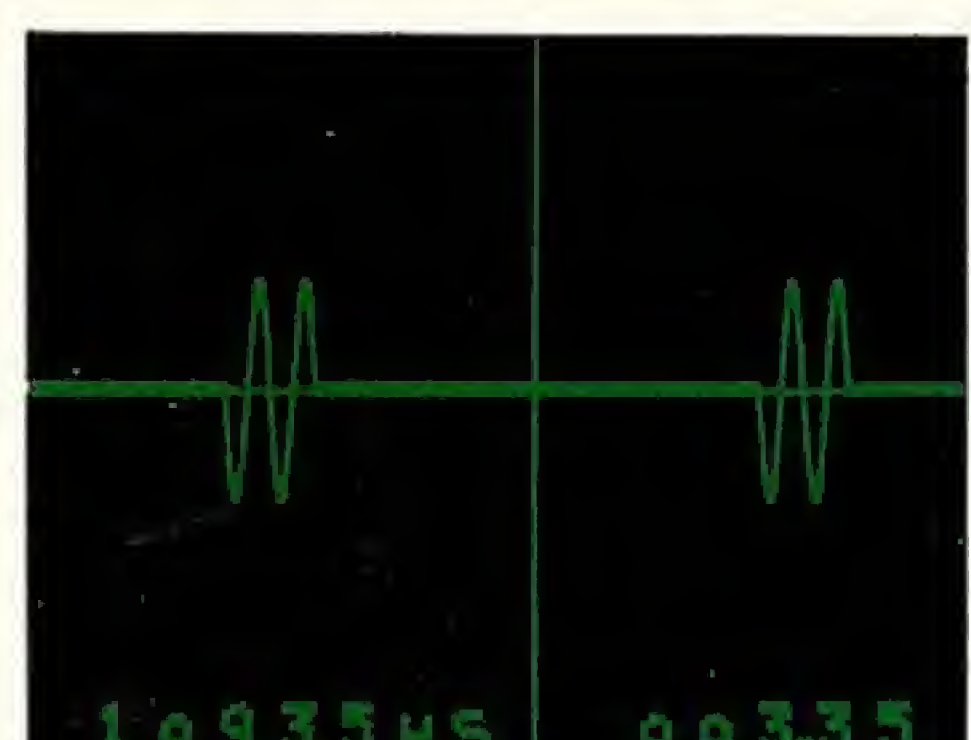
Tone burst waveform at 100Hz



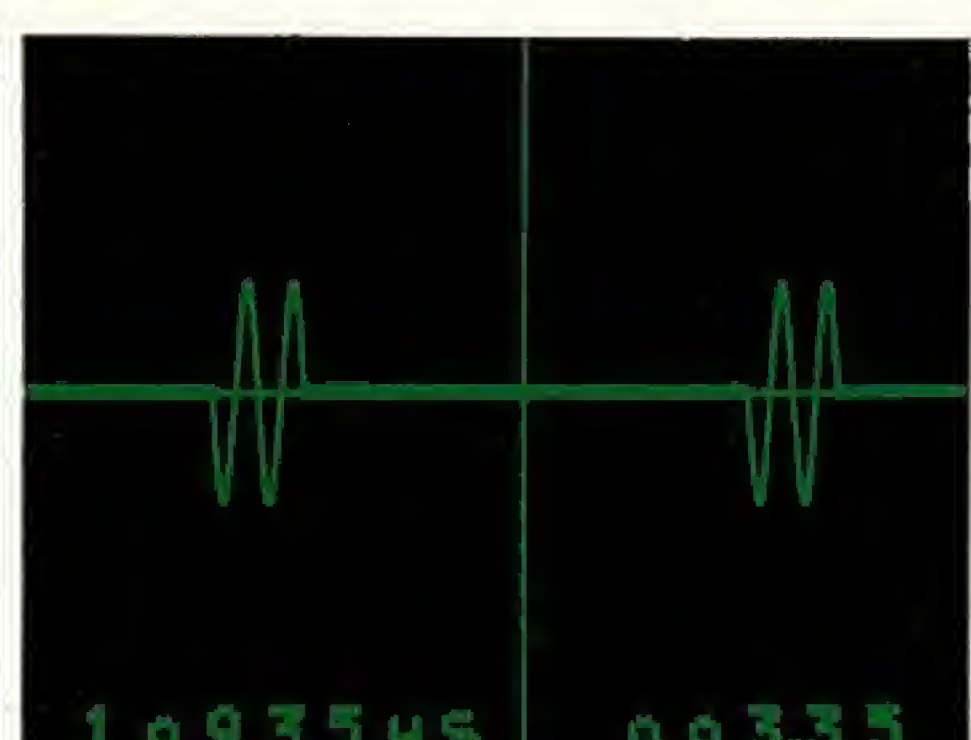
Tone burst waveform at 100Hz



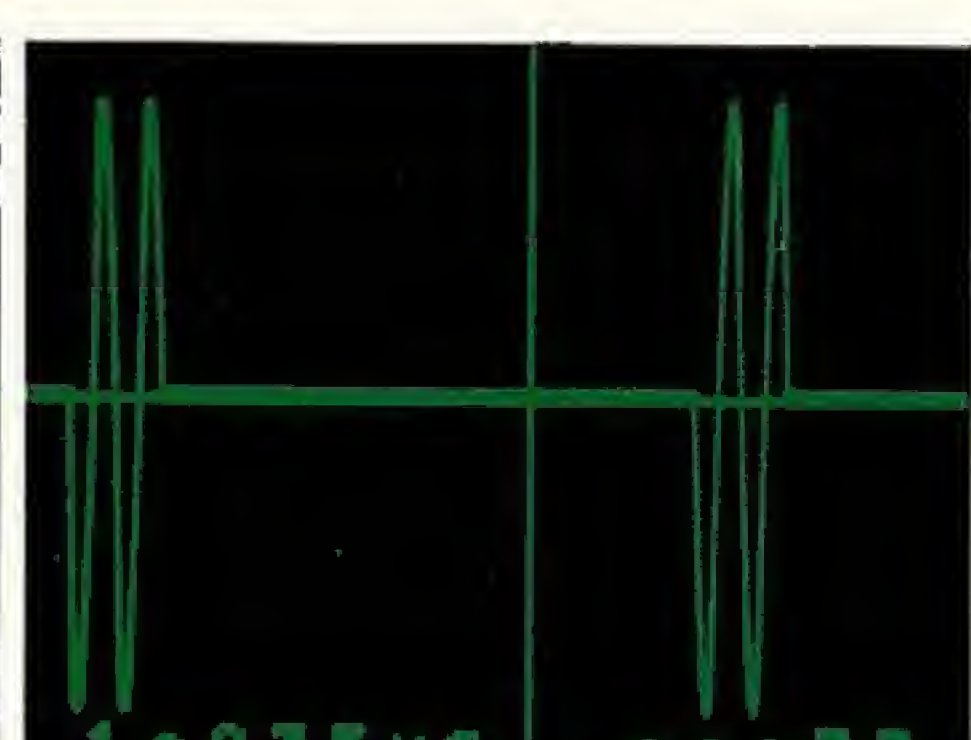
Tone burst waveform at 100Hz using a 10m speaker cable



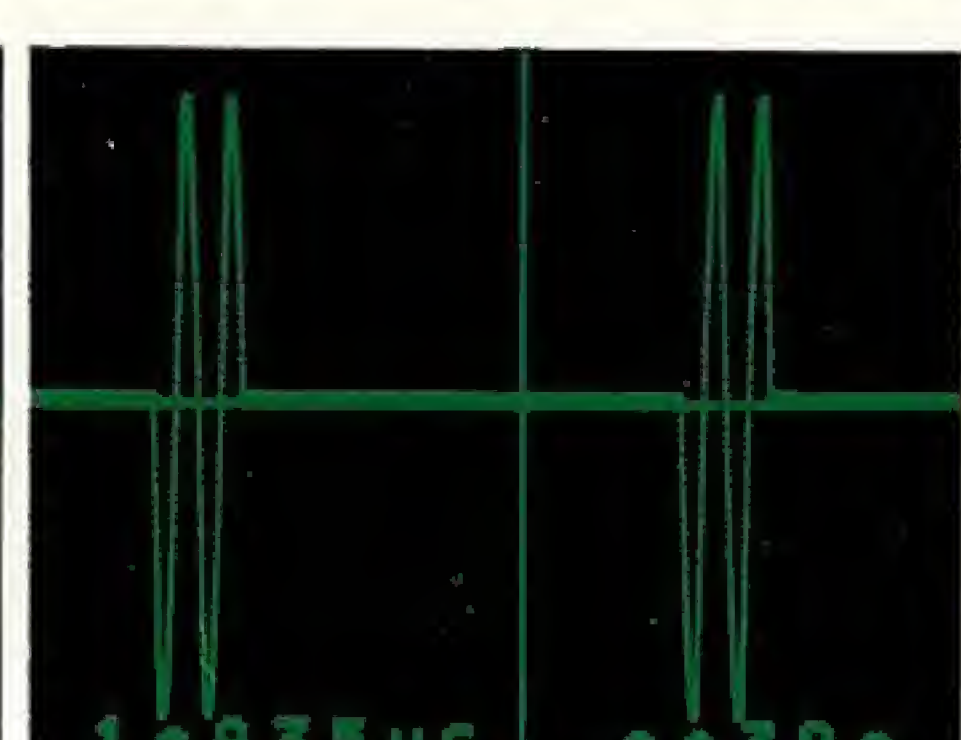
Tone burst waveform at 1kHz



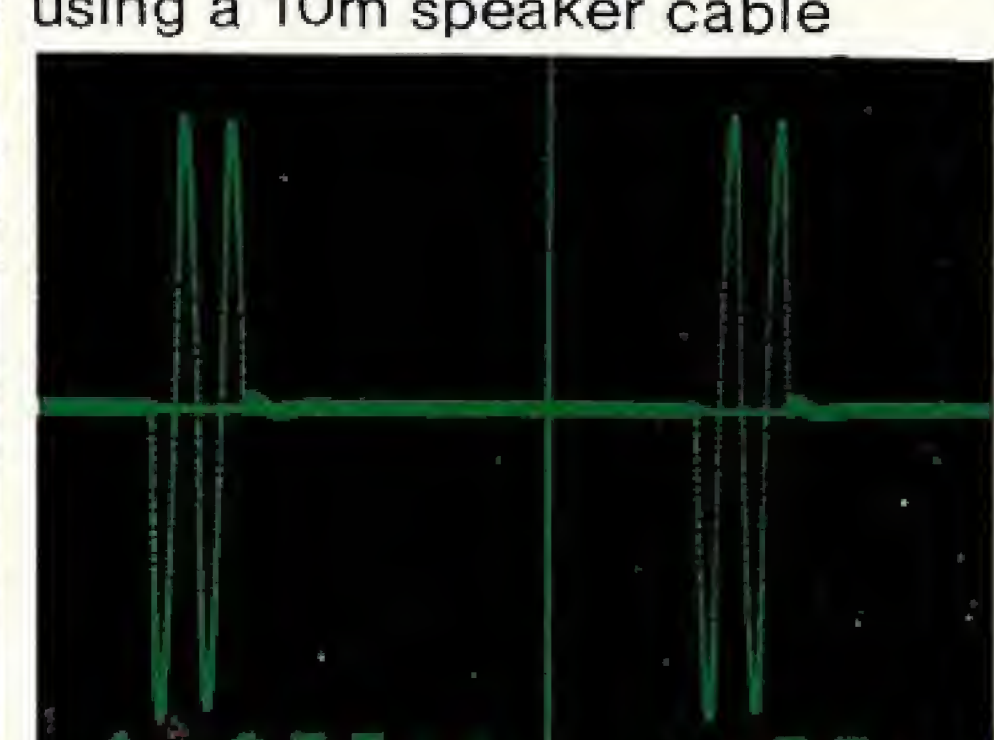
Tone burst waveform at 1kHz



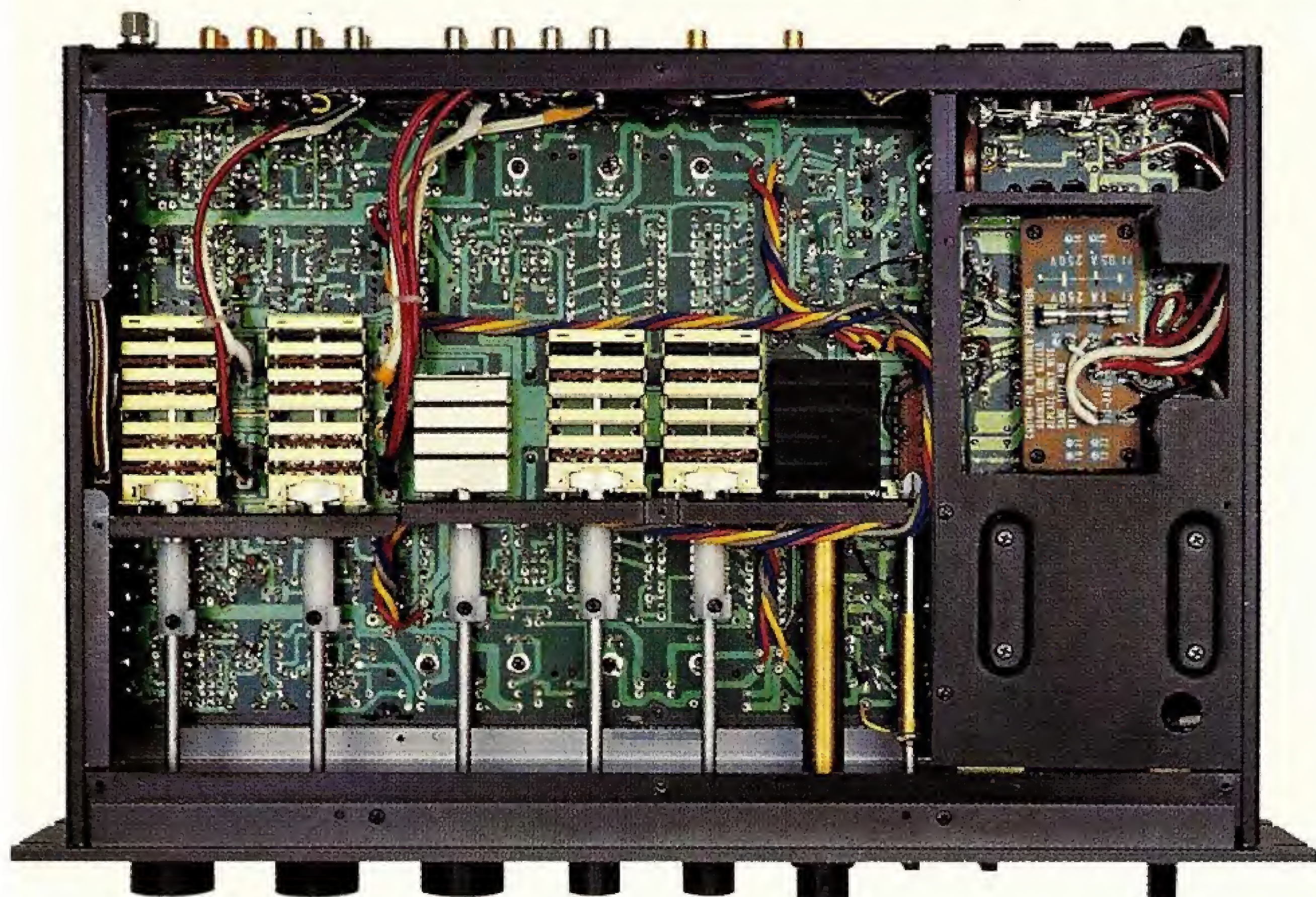
Tone burst waveform at 1kHz



Tone burst waveform at 1kHz



Tone burst waveform at 1kHz using a 10m speaker cable



Switches arranged along the center line between right and left channels



The 10m speaker cable deteriorates distortion at the speaker terminals.

The four oscilloscope graphs (above right) show serious waveform deformation when a conventional 10m long speaker cable is used. The Kenwood system, using the specially designed 1m long cable, shows minimal deformation.

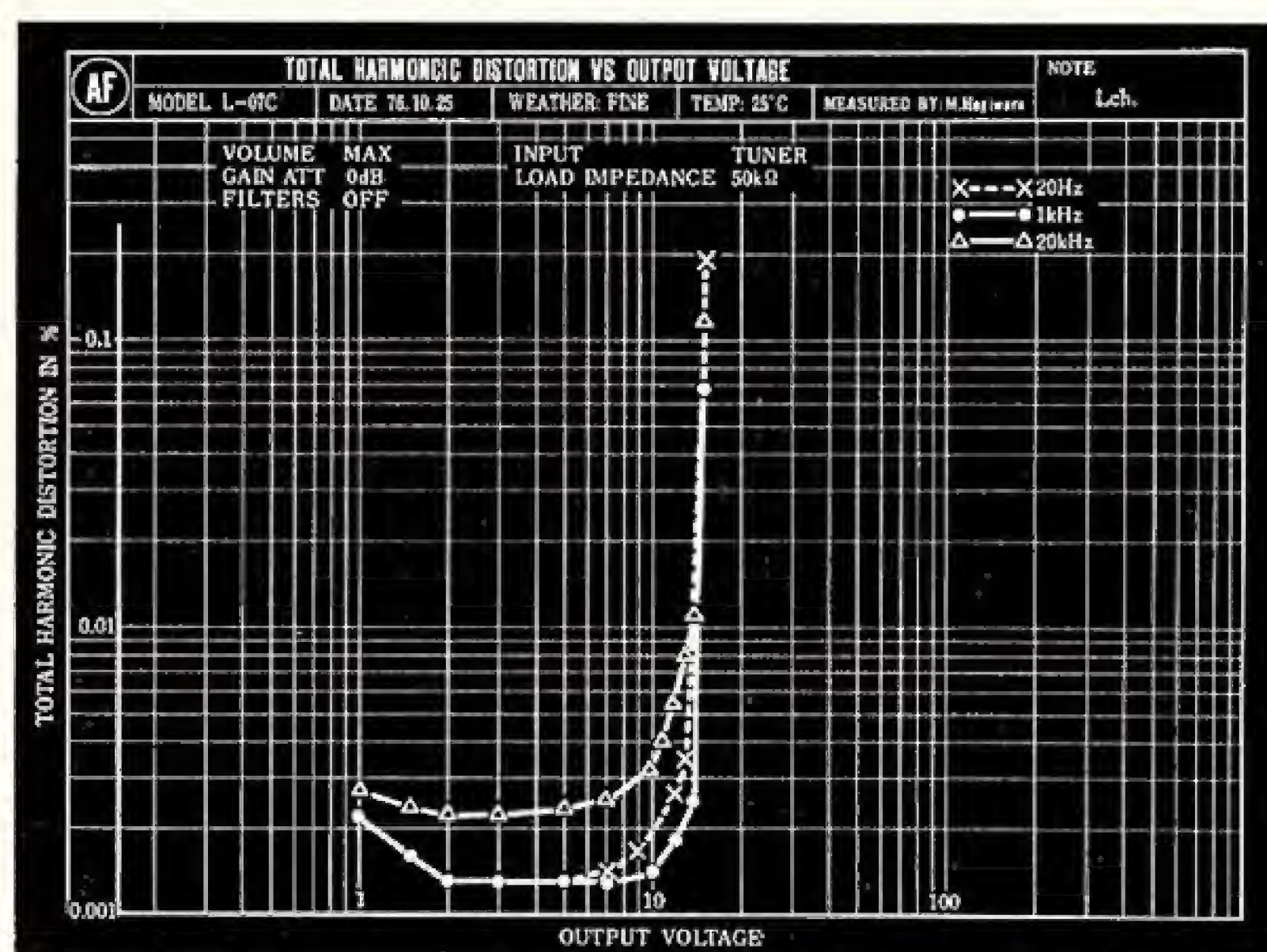
The L-07C Control Amplifier

High Output, Low Impedance Design

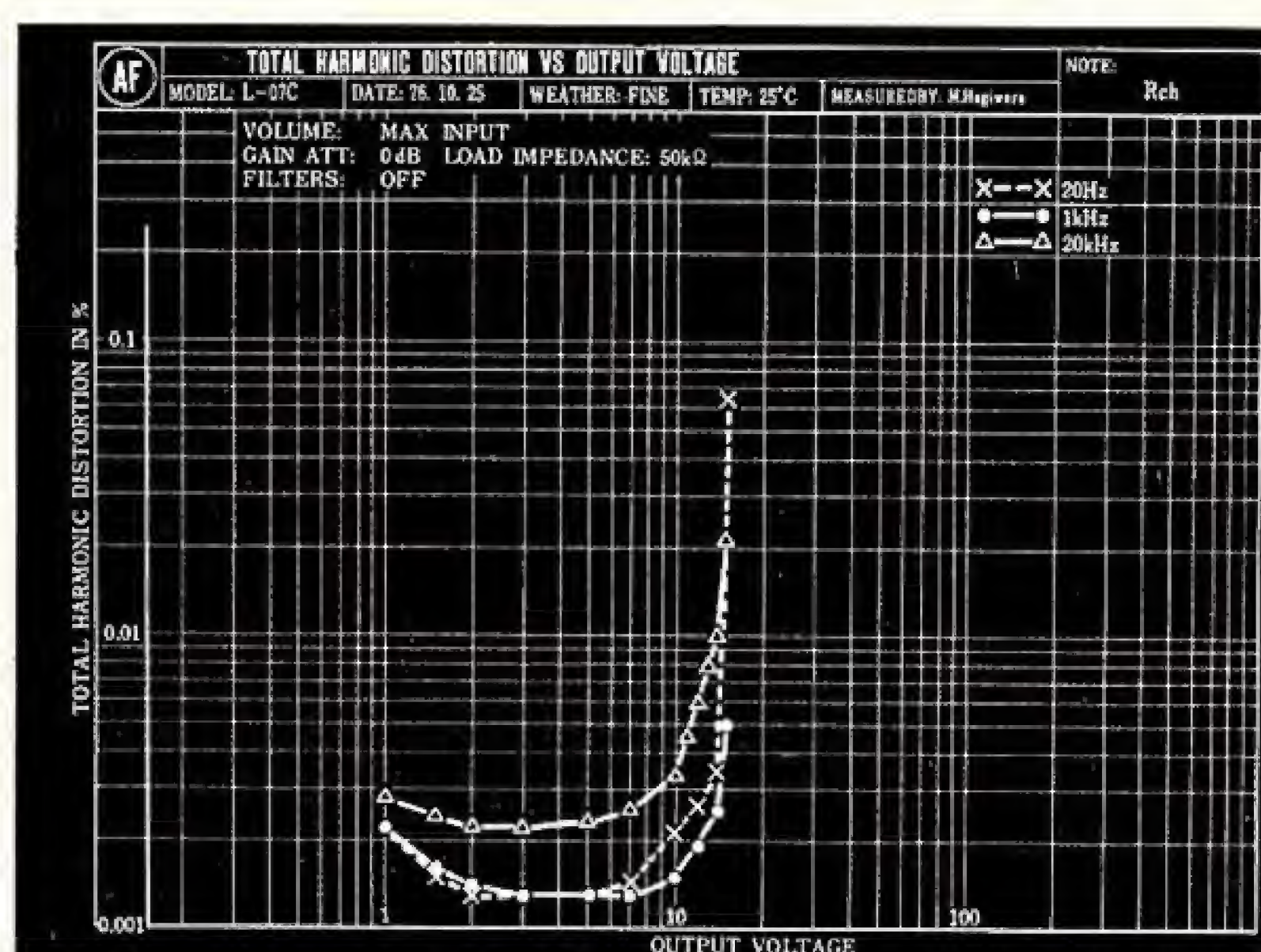
The deterioration in sound quality normally caused by long cable induction has been successfully avoided by the design of the L-07C control amplifier in relation to its distant power amplifier. In this design, the GAIN ATT is a buffer employing a 100% feedback type

amplifier circuit with zero gain, almost identical in structure to the equalizer and tone amplifiers. The resulting output impedance is less than 10 ohms. Maximum output is about 10V, which means that not only is it possible to connect any power amplifier to the L-07C, but distortion at 1V rated level is reduced to an unmeasurable level. For this, a ladder type constant impedance attenuator is used. As with the L-07M,

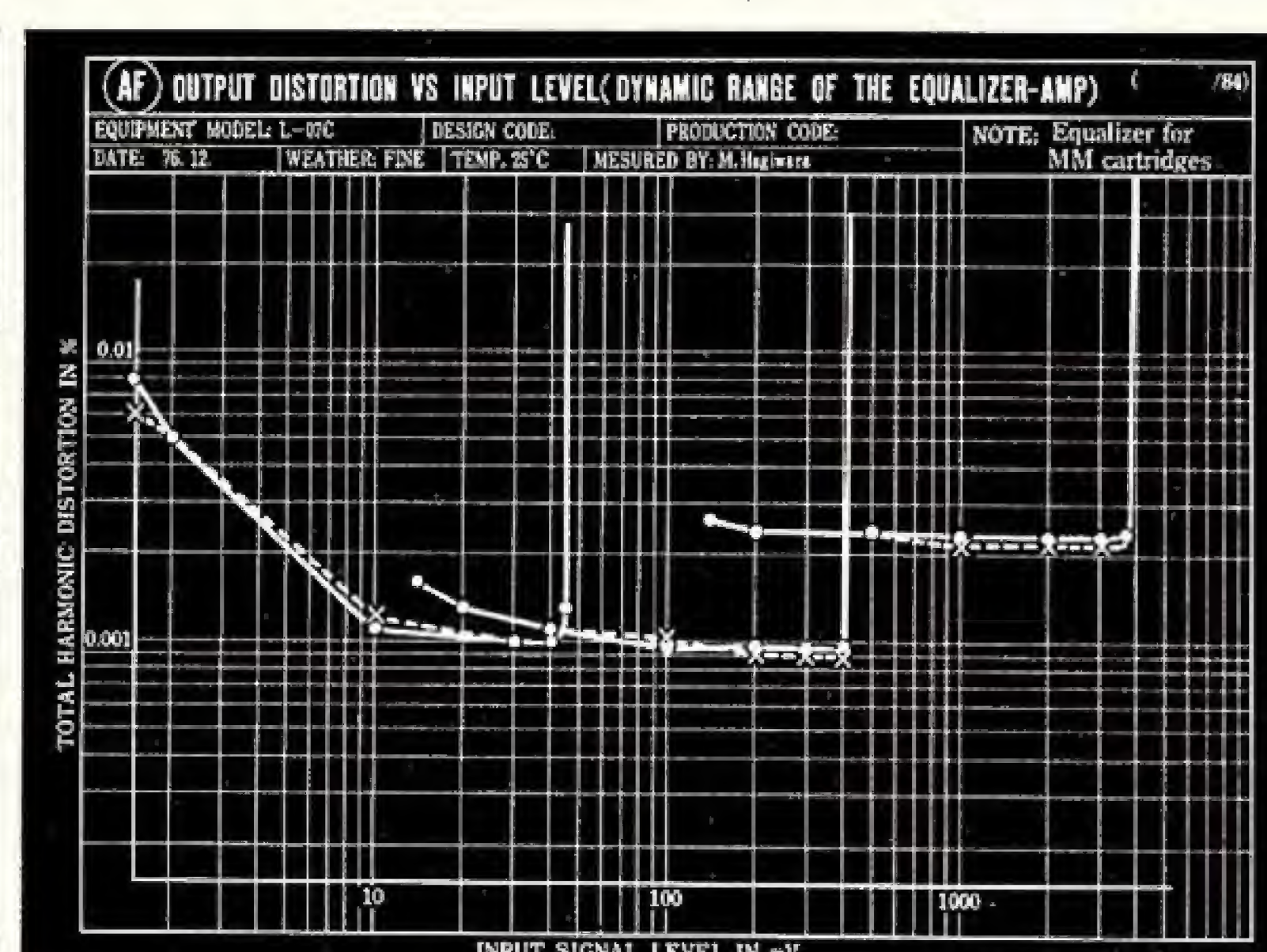
special screw type locking pin plugs are used to prevent possible damage through loose connections. Moreover, the audio cable itself is not simply a low capacitance cable. It uses special materials and a structure designed to maintain the high level of sound quality obtained by the L-07C and L-07M. A relay circuit turns the power of the remote L-07M ON-OFF independently of the AC cord.



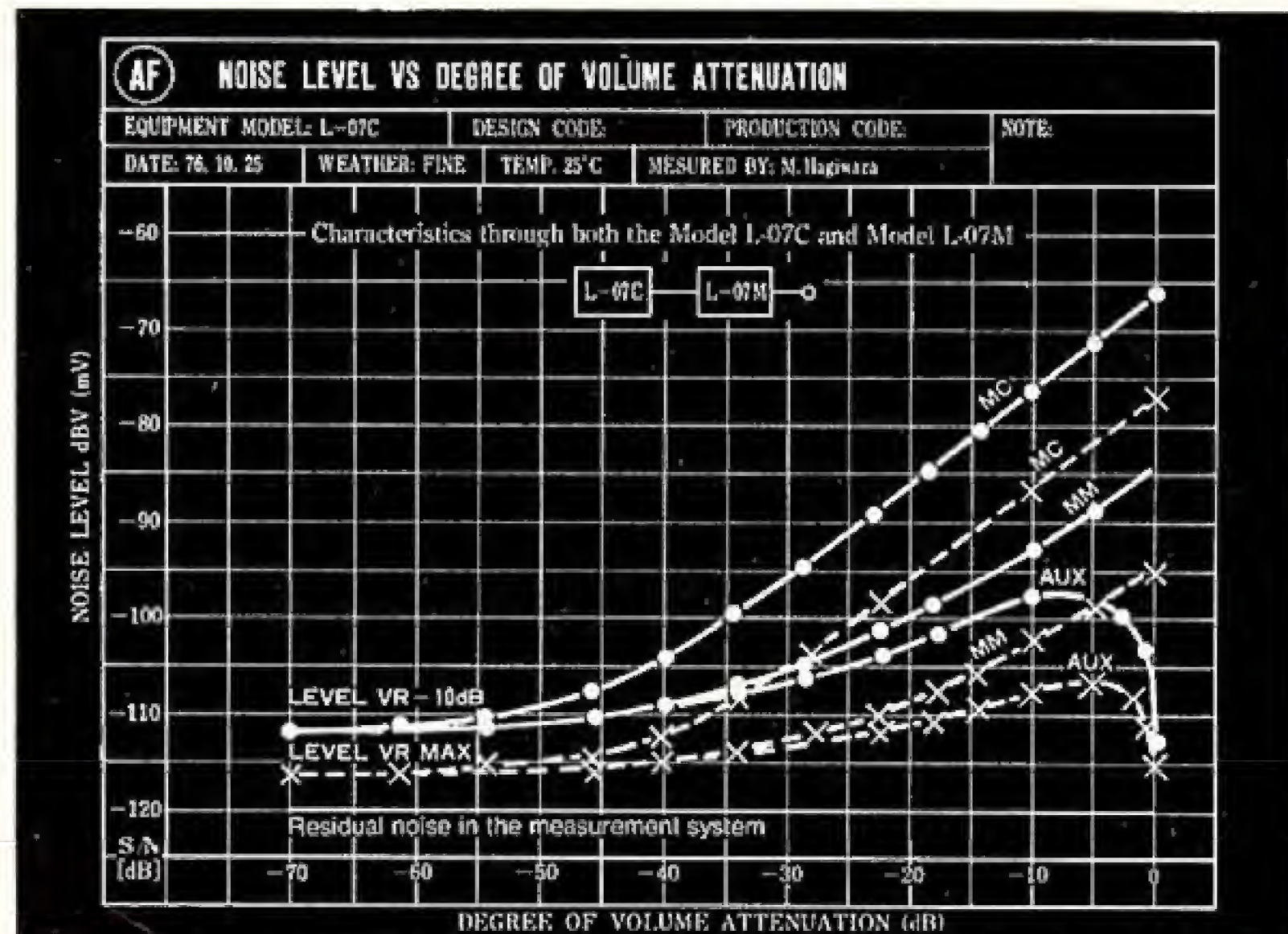
Total harmonic distortion vs output voltage characteristics for left channel (L-07C)



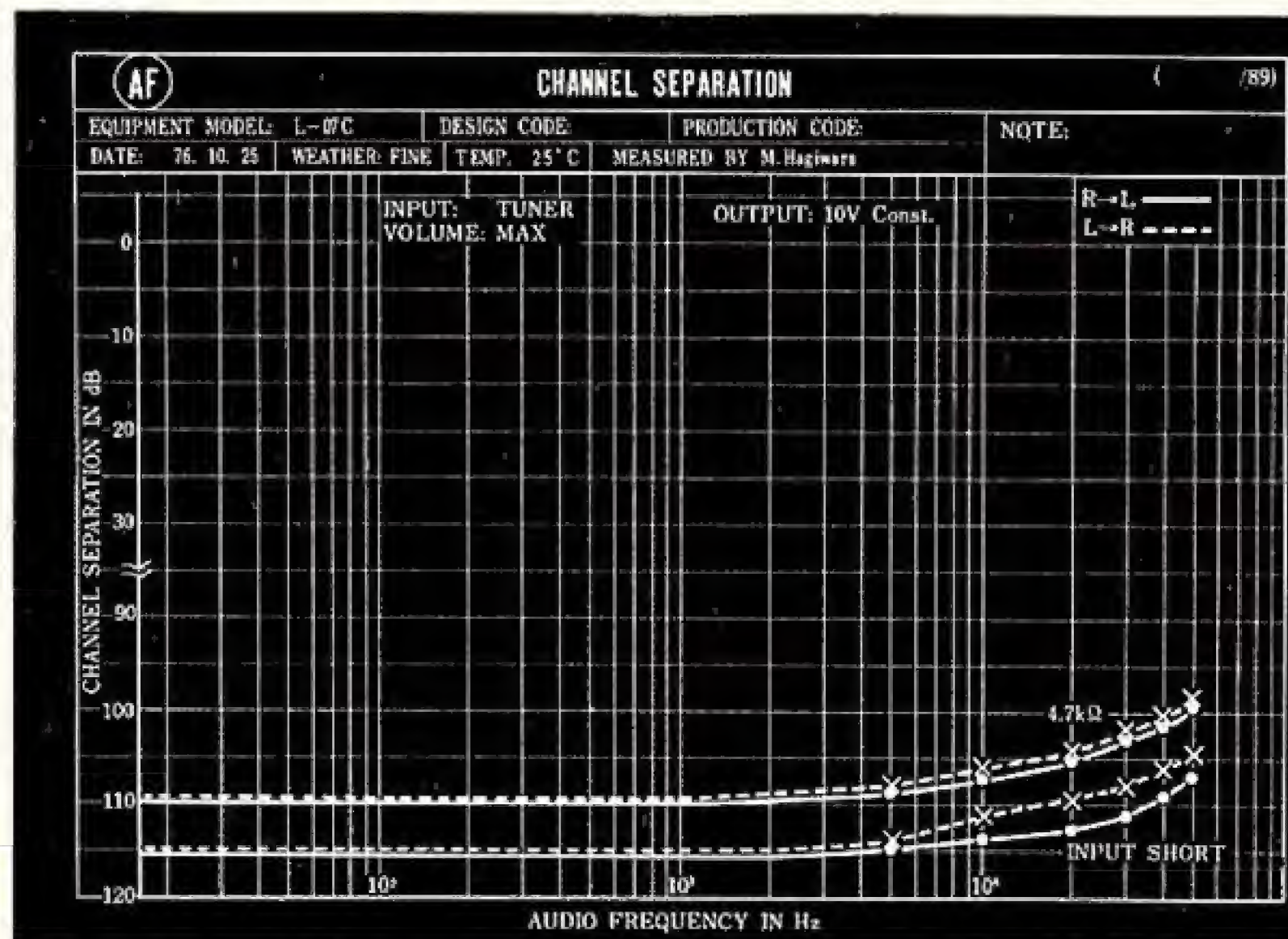
Total harmonic distortion vs output voltage characteristics for right channel (L-07C)



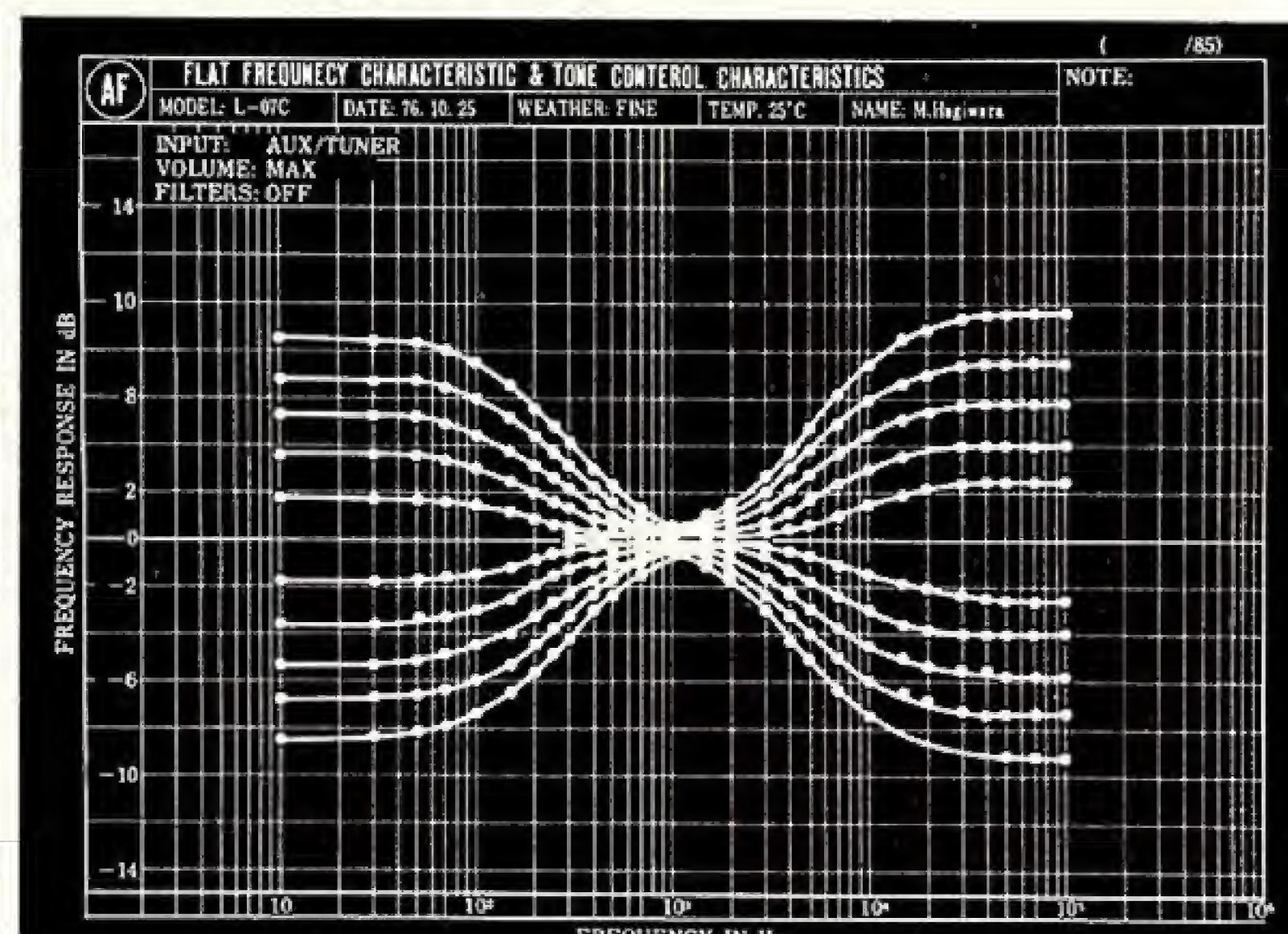
Total harmonic distortion vs equalizer input characteristics (L-07C)



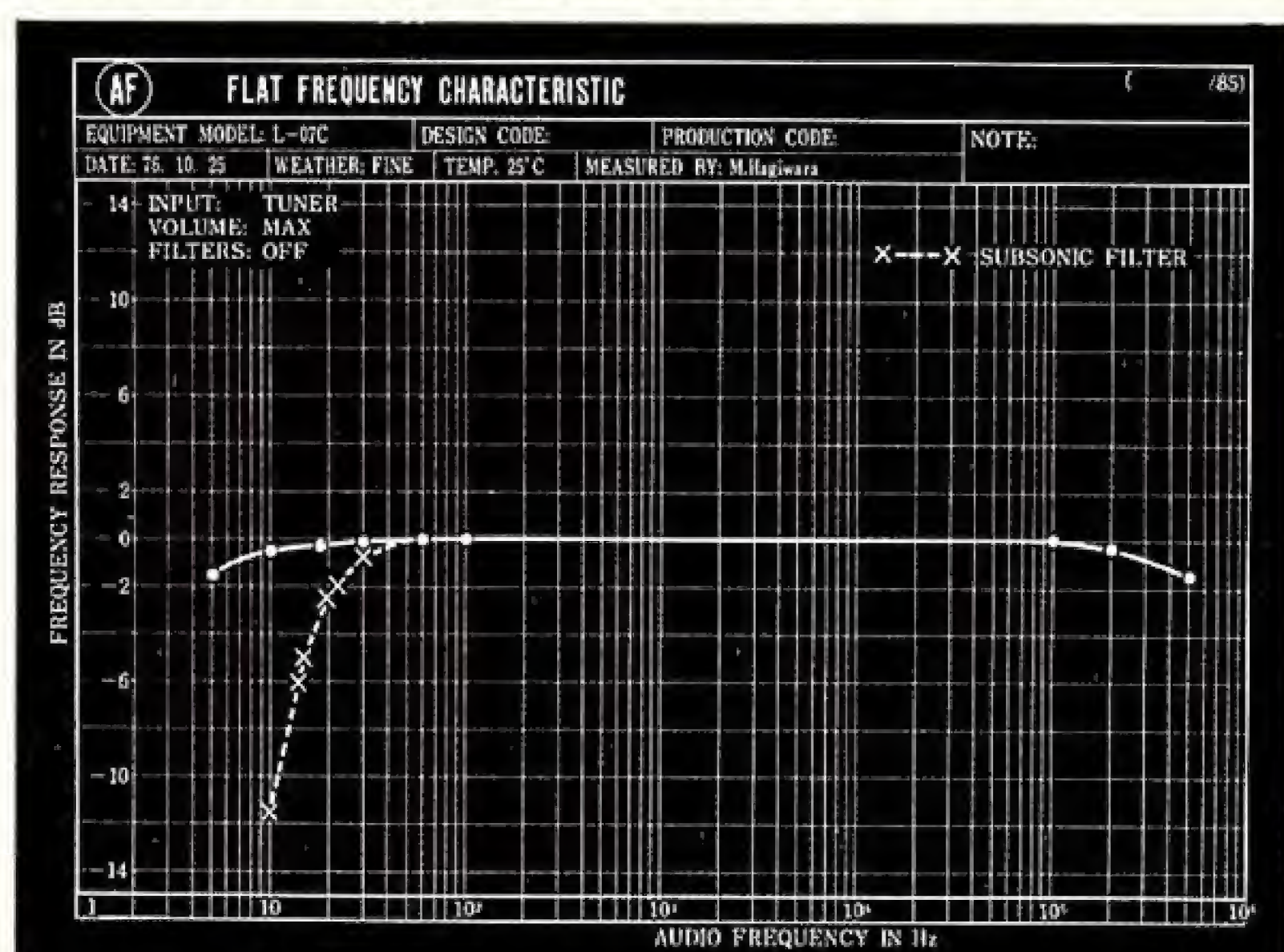
Noise level vs volume attenuation (L-07C)



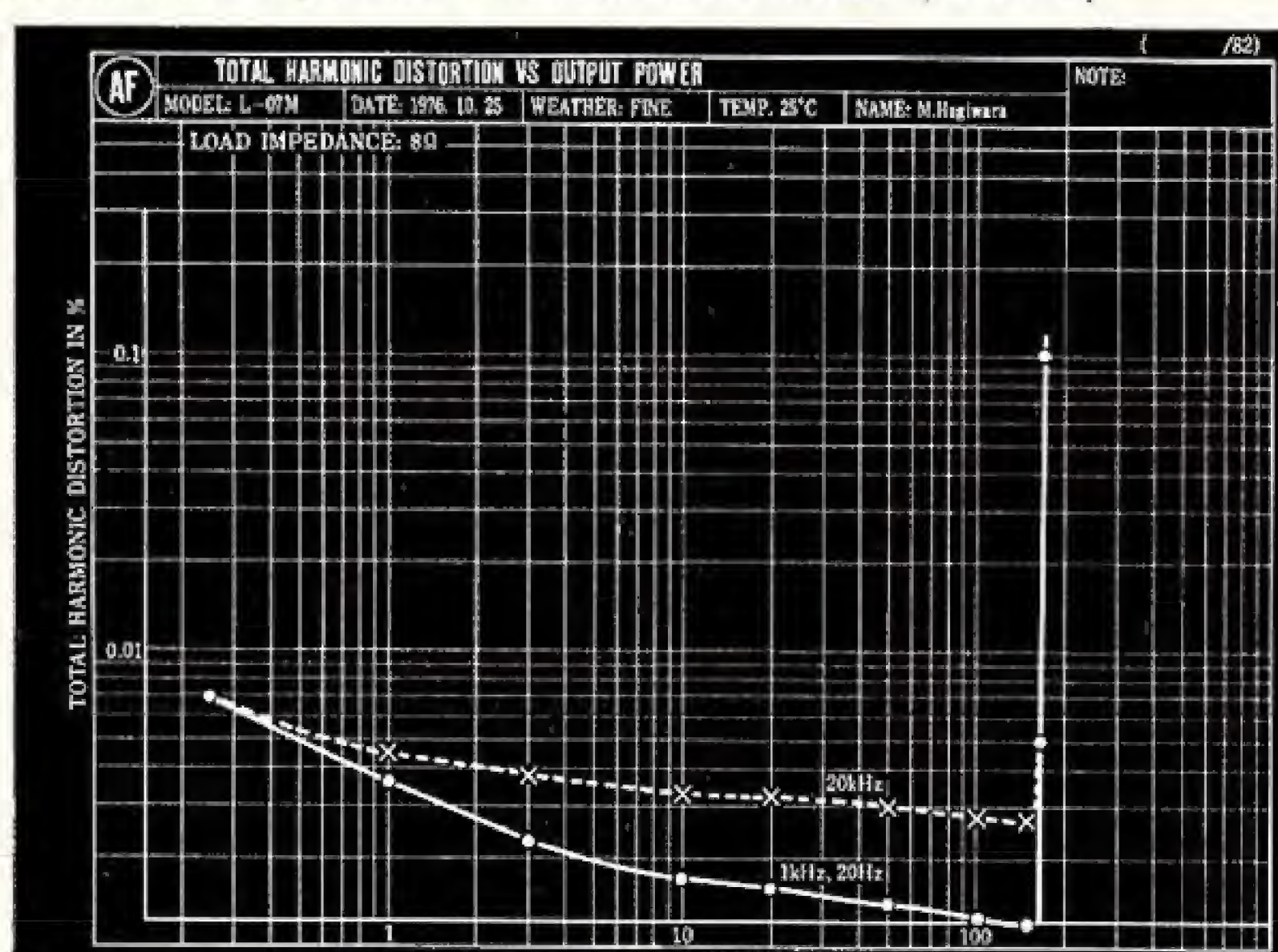
Channel separation characteristics (L-07C)



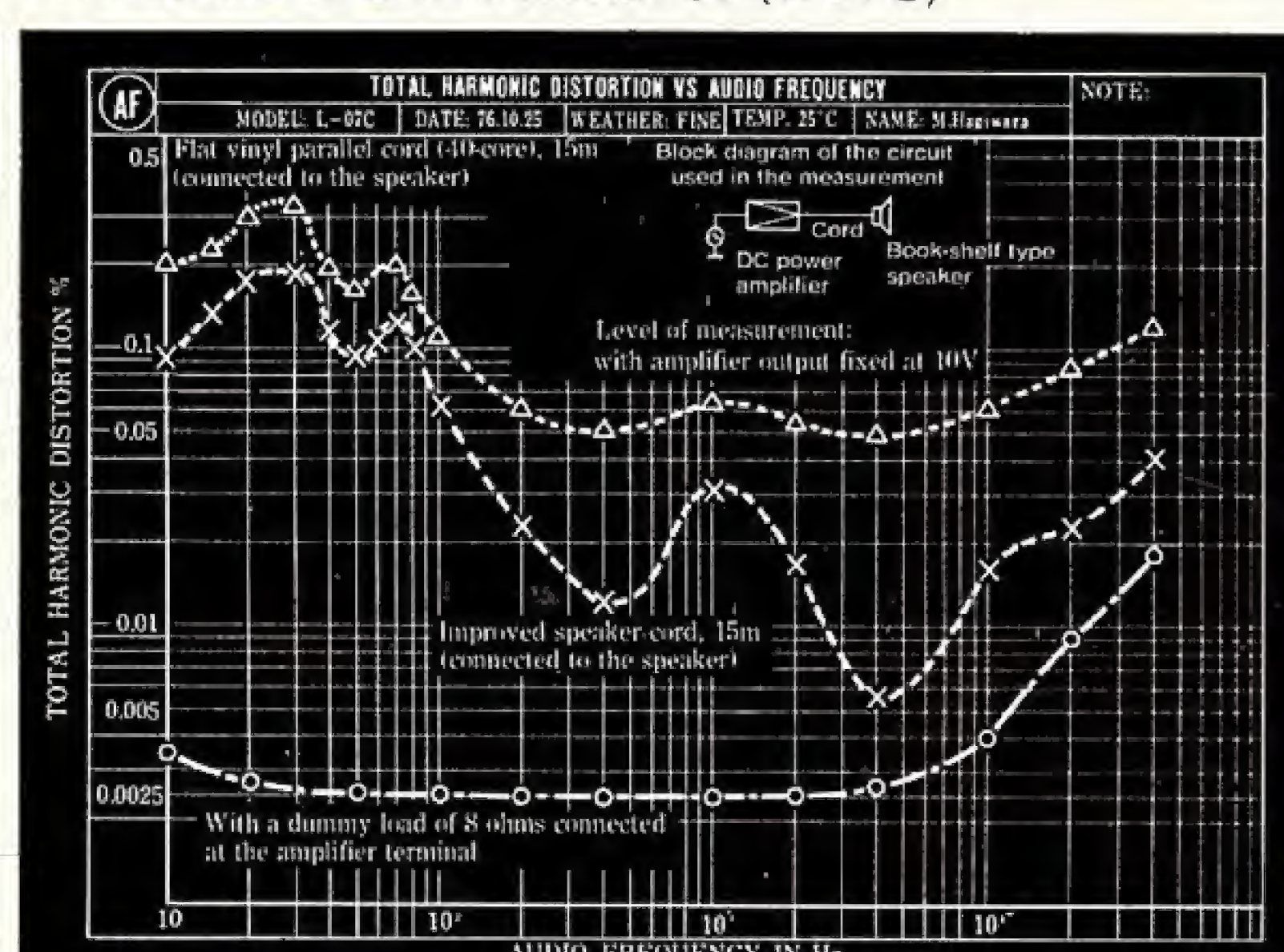
Tone control characteristics (L-07C)



Frequency characteristics (L-07C)



Total harmonic distortion vs output power characteristics (L-07M)



Distortion factor at the speaker input terminal

Two Independent Phono Equalizers

Even with a second phono input, a single equalizer amplifier is generally considered adequate. In the L-07C, however, there are two FET differential amplifiers with current mirror load in the first stages and a complementary single-ended push-pull circuit in the final stages, providing unmeasurably low distortion. The common mode rejection ratio (CMRR) too is improved considerably. One of the equalizers is designed specifically for use with MC cartridges. Since it is a high gain equalizer which is highly sensitive to contacts and switching at low level signal inputs, this one is the first of its kind to use an ICL circuit to obtain a S/N ratio which is high even at low inputs, and which remains high in actual operating conditions. For example, for 2 mV input sensitivity, 84 dB S/N ratio is obtained.

Rational Circuit Layout

Kenwood believes that by reducing the

number of times the signal has to pass through switch contacts, etc. performance in actual operating conditions can be greatly improved. This is why the circuits of the L-07C are laid out in rational signal flows, and divided into the three zones of equalizer, tone and buffer. This helps to provide wide frequency and dynamic range. With residual noise suppressed to the minimum (about -120 dBV at the output terminals), the noise level is virtually inaudible through the speakers. Even at low volume, the S/N ratio does not deteriorate. A dual-knob high precision GAIN ATT. allows continuous linear adjustment to -30 dB with constant impedance. Gang error is limited to within ± 0.3 dB. Thus minimum distortion is assured.

Ideal Construction

All circuits are mounted on a large double-sided printed circuit board, and wiring reduced to an absolute minimum. Perfect shielding is provided by the

arrangement of the controls along the center of this board. Right and left channel circuitry is divided for better separation. With crosstalk actually lower than noise at a separation of 100 dB and over, up to 20 kHz, this provides better localization as well as exceptional clarity and purity of reproduced sound.

Unique TAPE REC OFF Switch

This is a unique feature designed to maintain the excellent tonal quality of the control amplifier. By defeating the feed to tape decks which are connected but not in use, no noise or other interaction between them and the L-07C can occur.

OUTPUT ON OFF Switch

Generally, owners of high power amplifiers do not like to temporarily disturb precise preset volume levels, so for this reason the L-07C has a switch that attenuates to zero.

Massive 300 watts minimum power, RMS at 8 ohms, 20Hz to 20,000Hz, sustained at high volume levels, with distortion at less than 0.02%, characterizes the L-09M, a single channel direct drive power amplifier which combines high power and superior tonal quality.

The L-09M is specifically designed for the audio purist who demands the sustained high powered performance which produces the extra dynamics closest to live sound. Yet, for all the power, the quality of sound remains pure and natural. Its design concept differs from the L-07M only in degree—chiefly in the huge 300 watts of continuous power driven into 8 ohms through 20Hz to 20,000Hz. In its construction, an FET differential amplifier in the first stage is followed by a 3-stage differential amplifier with constant current load, and a Darlington connected, parallel and series push-pull, full-complementary symmetry power circuit.

With full ICL-OCL construction, the DC amplifier yields unusually low 0.02% THD. Massive, solid cast aluminum heat sinks dissipate heat efficiently. In addition, a silent two-speed forced air fan cooling system operates automatically when the amplifier is turned on, increasing its speed at

a specified output level to provide maximum cooling. The efficiency of this cooling system allows the heat sink construction to be smaller than usual, contributing to the compact design of the L-09M, and permitting ideal compatibility with the other models in the series. A remote control relay circuit, switchable at the L-07C control amplifier, allows the L-09M to be placed close to each speaker system using the supplied one-meter long speaker cable in the same way as the L-07M. Power monitoring is possible using the three-range meter, and there is an LED Clipping Level indicator. There is also A-B speaker switching. As with the L-07M, design effort has been concentrated on maintaining optimum performance with the lowest possible distortion at sustained high volume levels. There are other high powered amplifiers around, but few, if any, can match the L-09M's exceptional tonal quality.



A high quality audio tuner matching Kenwood's direct drive amplifier system not only in design, but in technology. The L-07T FM stereo tuner features balanced performance and natural tonal quality.

The L-07T Is A True Audio Tuner

Audio manufacturers have tended to improve individual tuner performance data, while stressing luxury accessory features which though attractive, add little to critical tonal quality. Now Kenwood introduces the L-07T, an audio tuner that provides balanced performance to achieve natural tonal quality. Naturally, the circuitry that helps to achieve this is state-of-the-art. Wide and Narrow IF Band selectivity, using our newly developed Surface Acoustic Wave filter. Double diffused MOS FETs in the front end. A 7-ganged tuning capacitor with built-in oscillator for highly accurate tuning. And Phase Lock Loop auto response switching that eliminates undesirable beat distortion. Moreover, a balanced power supply maintains critical tonal quality. The L-07T must be considered as a true audio tuner.

Seven-Ganged Tuning Capacitor And Double Diffused MOS FETs

The L-07T's RF stage employs highly sophisticated circuitry to reach a high level of sensitivity without overload distortion. Usable sensitivity measures $1.6\mu\text{V}$, while at 50 dB quieting, the figure is $2.8\mu\text{V}$. To achieve these figures, a 7-ganged tuning capacitor incorporates a built-in oscillator circuit accurately aligned by the actual frequency rather than by the conventional degree of capacitance. The use of new double diffused MOS FETs and a single-triple-double tuned circuit configuration greatly improves the tuner's ability to reject interference. Both image response

and spurious response of the L-07T are excellent.

Linear Phase Solid State IF Filters And Wide Bandwidth

Six-pole IC filters, multiple integrated circuits and a wide variable IF band all help to improve group delay characteristic, and result in high gain, early full limiting and stability at any signal strength.

Wide And Narrow IF Band Selection Uses New SAW Filter

Adjacent channel interference is caused by stations that are too close together, and in this case wide IF band selectivity with its low distortion is inadequate. The L-07T provides both Wide Band and Narrow Band selectivity, with independent circuitry for each. The Wide Band circuit employs our newly developed 2-stage Surface Acoustic Wave filter (SAW) which has excellent group delay characteristic for ideal IF response, adding to the high degree of tonal quality. The Narrow Band circuit includes 4-element ceramic filters in three stages (a total of twelve elements) to obtain high 100 dB selectivity.

PLL Auto Loop Response Switch With DSD Circuitry

The auto loop response switching in the Phase Lock Loop multiplex circuit is another Kenwood innovation designed to eliminate undesirable signal components and annoying frequency beats inherent in the FM signal. In addition, the stereo decoder incorporates the Kenwood-development Double Switch-

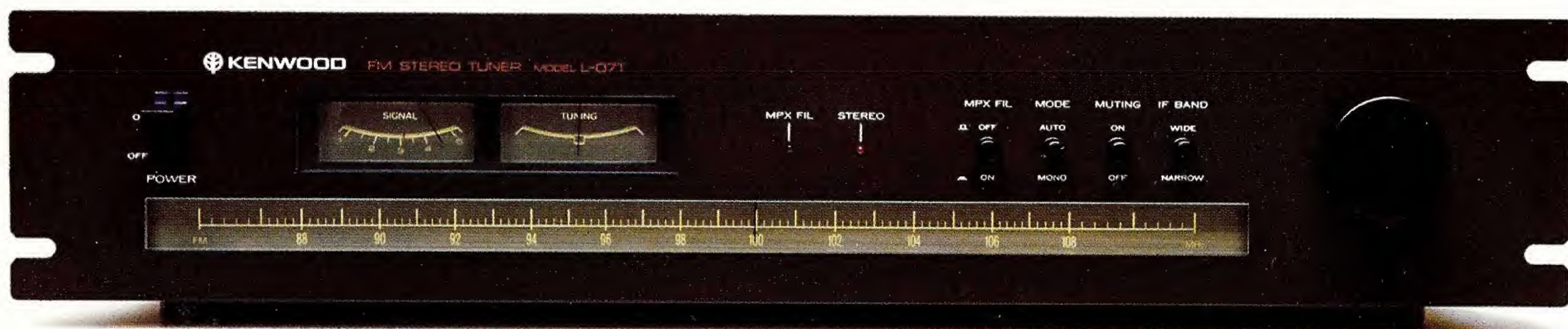
ing Demodulation circuitry designed to obtain optimum separation not only in the mid frequencies but throughout the entire audible range. Thus, 45 dB of separation is obtained through 50 Hz to 10 kHz, with 50 dB of separation at mid frequencies.

The Tuner Power Supply Is Also Important For Tonal Quality

A well designed audio power supply has a desirable effect on overall sound quality by eliminating interference. Thus, the L-07T incorporates a $3,300\mu\text{F}$ electrolytic capacitor, equivalent to the power supply capacitance of an audio amplifier. In this way, impedance is reduced to the minimum, and tonal quality is enhanced. The power supply voltage is supplied individually to both RF and AF stages. Moreover, the hermetically sealed type operational amplifier and positive-negative balanced power supply make the L-07T capable of withstanding a phenomenal degree of overmodulation in excess of 300%.

Some Functional Details

These include a high linearity signal meter and a center channel tuning meter. A 75-ohm coaxial cable connector with a special screw to minimize signal loss. A rear panel $25\mu\text{S}$ de-emphasis switch for Dolby FM broadcasts. MPX OUT and FM DET OUT terminals. LED indication for MPX and FM Stereo. And a new 270 mm linear frequency tuning dial. Needless to say, the attractive, sophisticated design complements the Kenwood direct drive amplifier system.





L-07C CONTROL AMPLIFIER



Specifications described here are based on the measured values at the tip of special 12-meter audio cable provided, at its connection to the output terminal of Model L-07C.

PERFORMANCE

Input Sensitivity/Impedance/Signal to Noise Ratio (IHF A Curve)	
Phono 1 (for MM use)	2.0 mV/ 50 k ohms/ 83 dB
Phono 2 (for MC use)	0.2 mV/600 ohms/ 65 dB
Tuner	140 mV/ 50 k ohms/110 dB
AUX	140 mV/ 50 k ohms/110 dB
Tape Play	140 mV/ 50 k ohms/110 dB
Maximum Input Voltage for	
Phono 1	350 mV (RMS), T.H.D. 0.003% at 1,000 Hz
Phono 2	35 mV (RMS), T.H.D. 0.009% at 1,000 Hz
Frequency Response	
Phono 1	RIAA Standard Curve
Phono 2	± 0.2 dB (20 Hz–20 kHz)
Tuner, AUX & Tape Play	± 0.2 dB (50 Hz–20 kHz) –0.8 dB (20 Hz) 20 Hz– 50 kHz (+0 dB, –0.1 dB) 10 Hz–200 kHz (+0 dB, –0.5 dB) 3 Hz–500 kHz (+0 dB, –2 dB)
Channel Separation	100 dB throughout 20 Hz–20 kHz (short-circuited)
Tone Control	
BASS	±7.5 dB at 100 Hz
TREBLE	±7.5 dB at 10 kHz
Subsonic Filter	at 18 Hz, 12 dB/Octave
Total Harmonic Distortion	
Tuner, AUX, Tape Play	0.003% at 1V Output
(20 Hz–20 kHz)	0.005% at 7V Output
Phono 1	0.003% at 1V Output
(20 Hz–20 kHz)	(VOLUME at –20 dB & GAIN ATT at –10dB)
Phono 2	0.009% at 1V Output
(20 Hz–20 kHz)	(VOLUME at –20 dB & GAIN ATT at –10 dB)
Output Voltage & Impedance	
Output	1 V/less than 10 ohms
Maximum Output	10 V/less than 10 ohms
Tape Rec.	140 mV/100 ohms
Load Impedance	50 k ohm

GENERAL

Power Requirement	60 Hz 117 V
Power Consumption	50 Watts
AC Outlet	1 UNSWITCHED/100W Max. 3 SWITCHED /300W Max.
Dimension	W 18-29/32" (480mm) H 3-15/16" (100mm) D 13-1/16" (332mm)
Weight (Net)	15.4 lbs (7.0 kg)
(Gross)	18.2 lbs (8.3 kg)

The Kenwood Direct Drive Amplifier System Is Flexible Enough To Meet All Your Needs

Whether you are an audio purist reaching for the upper limits of power, or whether you have more modest power needs, the Kenwood direct drive amplifier system is designed for flexibility. Both the 150-watt L-07M and the 300-watt L-09M are designed with minimal distortion to achieve natural sound quality. Both may be effectively used with the L-07C control amplifier, and with the L-07T FM stereo tuner. All four models are designed to be compatible

L-07M POWER AMPLIFIER



Specifications described here are based on the measured values at the tip of the special speaker cable provided, at its connection to Model L-07M.

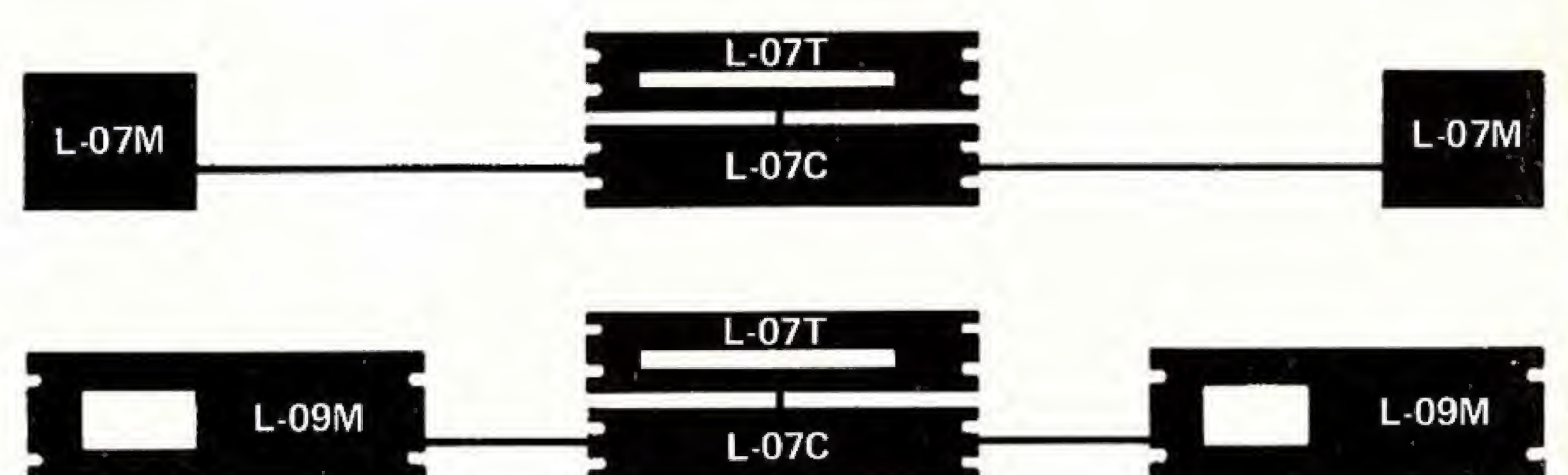
PERFORMANCE

Power Output	
150 watts minimum power, RMS at 8 ohms from 20Hz to 20,000Hz with no more than 0.008% total harmonic distortion.	
Continuous Power	150 watts 8 ohms at 1,000 Hz 200 watts 4 ohms at 1,000 Hz
Dynamic Power Output	300 watts 4 ohms at 1,000 Hz
Total Harmonic Distortion	0.008% at rated power output into 8 ohms (T.H.D.) 20 Hz–20 kHz 0.008% at 15 watts into 8 ohms 20 Hz–20 kHz 0.002% at rated power into 8 ohms 1 kHz 0.003% at 15 watts into 8 ohms 1 kHz 0.003% at rated power into 4 ohms 1 kHz 0.003% at 20 watts into 4 ohms 1 kHz
Intermodulation Distortion	0.002% at rated power into 8 ohms (60 Hz : 7 kHz = 4 : 1) 0.002% at 15 watts into 8 ohms 0.003% at rated power into 4 ohms 0.003% at 20 watts into 4 ohms
Frequency Response	DC – 50,000 Hz +0, –0.5 dB DC –150,000 Hz +0, –1.5 dB
Signal to Noise Ratio	120 dB (short-circuited) (IHF-A Curve)
Damping Factor	100 into 8 ohms load 120 into 8 ohms load without Speaker Cable
Input Sensitivity/ Impedance	1V/50 k ohms
Speaker Impedance	Accept 4 ohms to 16 ohms
Speaker Cable Loss	0.01 ohms

GENERAL

Power Requirement	60 Hz 117 V
Power Consumption	630 watts at full power 45 watts at non-signal
AC Outlet	1 UNSWITCHED (Maximum 300 watts)
Dimensions	W 7-7/8" (200mm) H 6-3/32" (155mm) D 15-11/32" (390mm)
Weight (Net)	28.5 lbs (13 kg)
(Gross)	30.7 lbs (14 kg)

in their technology, in their proportions, and in their ultra-modern, sophisticated appearance. Through the medium of its pure tonal quality, the Kenwood direct drive amplifier system will help you explore a new dimension in the world of reproduced music.



L-09M POWER AMPLIFIER



Specifications described here are based on the measured values at the tip of the special speaker cable provided, at its connection to Model L-09M.

PERFORMANCE

Power Output

300 watts minimum power, RMS at 8 ohms from 20Hz to 20,000Hz with no more than 0.02% total harmonic distortion.

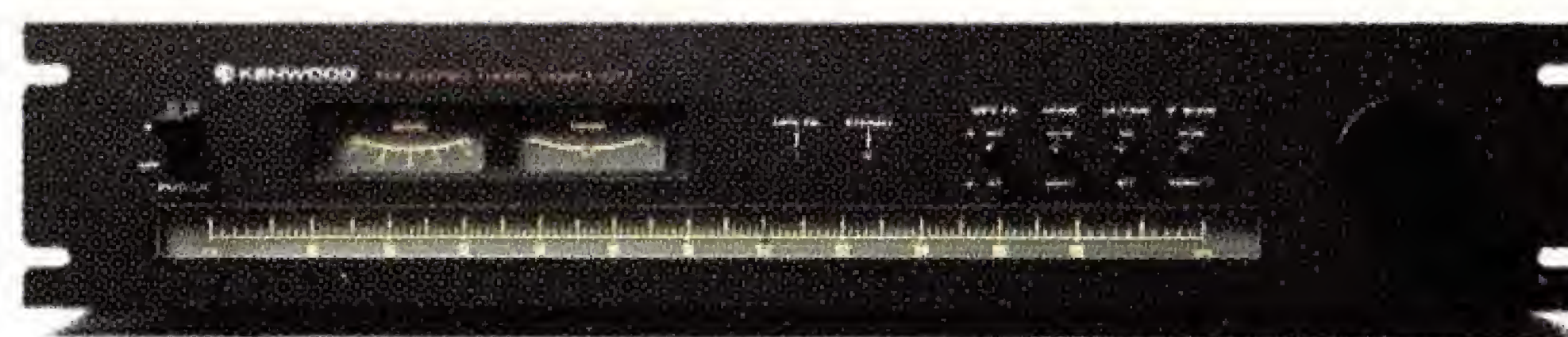
Continuous Power	300 watts 8 ohms at 1,000 Hz 400 watts 4 ohms at 1,000 Hz
Dynamic Power Output	1,000 watts 4 ohms at 1,000 Hz
Total Harmonic Distortion	0.02 % at rated power output into 8 ohms 20 Hz—20 kHz 0.01 % at 30 watts into 8 ohms 20 Hz—20 kHz 0.003% at rated power into 8 ohms 1 kHz 0.003% at 30 watts into 8 ohms 1 kHz 0.02 % at rated power into 4 ohms 1 kHz
Intermodulation Distortion (60 Hz : 7 kHz = 4 : 1)	0.007% at rated power into 8 ohms 0.003% at 30 watts into 8 ohms 0.02 % at rated power into 4 ohms
Frequency Response	DC — 50,000 Hz +0, -1.0 dB DC — 100,000 Hz +0, -2.0 dB
Signal to Noise Ratio (IHF-A Curve)	120 dB (short-circuited)
Residual Noise (IHF-A Curve)	50 μ V
Damping Factor	200 into 8 ohms load 250 into 8 ohms load without Speaker Cable
Input Sensitivity/ Impedance	1V/50 k ohms
Speaker Impedance	Accept 4 ohms to 16 ohms
Speaker Cable Loss	0.01 ohms

GENERAL

Power Requirement	60 Hz 117V
Power Consumption	1,190 watts at full power 60 watts at non-signal
AC Outlet	1 UNSWITCHED (Maximum 200 watts)
Dimensions	W 18-29/32" (480mm) H 6-16/32" (154mm) D 16-1/8" (409.5mm)
Weight (Net)	47.2 lbs (21.4 kg)
(Gross)	49.81 lbs (22.6 kg)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

L-07T FM STEREO TUNER



PERFORMANCE

Usable Sensitivity	9.3 dBf (1.6 μ V)
50 dB Quieting Sensitivity	
(Mono)	14.2 dBf (2.8 μ V)
(Stereo)	36.8 dBf (38 μ V)
Signal to Noise Ratio	
(Mono)	80 dB
(Stereo)	75 dB
Total Harmonic Distortion	WIDE NARROW
Mono at 1,000 Hz	0.08% 0.15%
50 Hz—10,000 Hz	0.1 % 0.4 %
15,000 Hz	0.12 % 0.2 %
Stereo at 1,000 Hz	0.1 % 0.15%
50 Hz—10,000 Hz	0.15 % 0.5 %
15,000 Hz	0.4 % 1.5 %
Capture Ratio	1.0 dB 1.5 dB
Alternate Channel Selectivity	30 dB 100 dB (400 kHz)
Stereo Separation	
at 1,000 Hz	50 dB 50 dB
50 Hz—10,000 Hz	45 dB 38 dB
15,000 Hz	40 dB 32 dB
Frequency Response	20 Hz to 15,000 Hz +0.2 dB -1.0 dB
Spurious Response Ratio	110 dB
Image Response Ratio	110 dB
IF Response Ratio	110 dB
AM Suppression Ratio	65 dB
Sub Carrier Product Ratio	70 dB
SCA Rejection Ratio	75 dB
Antenna Impedance	300 ohms balanced & 75 ohms unbalanced
FM Frequency Range	88 MHz to 108 MHz
Output Level	
at 400 Hz 100% Mod. Fixed	1.0V, 1.0 k ohms
Multipath Output Vertical	0.1V, 1 k ohms
Horizontal	0.3V, 10 k ohms
FM DET. Out	0.3V, 10 k ohms

GENERAL

Power Requirement	60 Hz 117 V
Power Consumption	28 watts
Dimensions	W 18-29/32" (480mm) H 3-15/16" (100mm) D 13-1/4" (336mm)
Weight (Net)	14.8 lbs (6.7 kg)
(Gross)	18.7 lbs (8.5 kg)



15777 S. Broadway, Gardena, Ca. 90248
75 Seaview Drive, Secaucus, New Jersey 07094
In Canada: Magnasonic Canada, Ltd.

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